REPORT RESUMES

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EMPHASIS--OCCUPATIONAL EDUCATION IN THE TWO-YEAR COLLEGE, ADDRESSES AND RECOMMENDATIONS PRESENTED AT A CONFERENCE SPONSORED BY THE MIDWEST TECHNICAL EDUCATION CENTER AND THE AMERICAN ASSOCIATION OF JUNIOR COLLEGES (ST. LOUIS, MAY 12-14, 1966).

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FOUR PAPERS PRESENTED AT A CONFERENCE SPONSORED BY THE MIDWEST TECHNICAL EDUCATION CENTER AND THE AMERICAN ASSOCIATION OF JUNIOR COLLEGES ARE FOLLOWED BY RELEVANT RECOMMENDATIONS OF THE CONFERENCE PARTICIPANTS. IN A PAPER ON "OCCUPATIONAL EDUCATION AND SOCIETY", EDMUND J. GLEAZER, JR., DISCUSSED ATTITUDES TOWARD TECHNICAL EDUCATION, RESPONSIVENESS TO A CHANGING SOCIETY, EFFECTIVE UTILIZATION OF TECHNICIANS, AND IMPROVEMENT OF COMMUNICATION AMONG EDUCATION, GOVERNMENT, BUSINESS, INDUSTRY, LABOR, AND THE PROFESSIONS. F. PARKER WILBER'S DISCUSSION OF ADMINISTRATIVE CONSIDERATIONS COVERED ADMINISTRATIVE ORGANIZATION, THE ROLES OF ADMINISTRATIVE PERSONNEL, RELATIONSHIP OF COORDINATORS AND TEACHING FACULTY, CAPITAL OUTLAY, USE OF ADVISORY COMMITTEES, RESEARCH, INTERPRETATION OF THE COLLEGE, AND PUBLIC RELATIONS. NORMAN C. HARRIS DISCUSSED THE PROCESS OF CURRICULUM DEVELOPMENT, GENERAL AND TECHNICAL EDUCATION, STUDENT SELECTION, PROGRAM BALANCE, FACULTY RECRUITMENT AND CONTINUING EDUCATION. CLYDE E. BLOCKER'S REMARKS ABOUT STUDENT PERSONNEL SERVICES CONCERNED THEORETICAL ASPECTS, CURRENT PRACTICES, IMPLEMENTATION AND ORGANIZATION, STUDENT RECRUITMENT, EDUCATIONAL RESPONSIBILITIES, AND PLACEMENT. THIS DOCUMENT IS ALSO AVAILABLE FOR $2.00 FROM THE AMERICAN ASSOCIATION OF JUNIOR COLLEGES, 1315 SIXTEENTH STREET, N.W., WASHINGTON, D.C. 20036. (WO)

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OCCUPATIONAL EDUCATION

In the Two-Year College

UNIVERSITY OF CALIF
LOS ANGELES

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CLEARINGHOUSE FOR
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INFORMATION

JC 670 539

Addresses and Recommendations
Presented at a Conference
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and

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FOREWORD

The "Emphasis Technical Education" conference was held in St. Louis at the Chase-Park Plaza Hotel, May 11-13, 1966. Key people in occupational education programs in community junior colleges all over the nation were in attendance, with challenging and dynamic leadership given to all aspects of the program by those recognized for their national roles in curriculum development, administrative organization, orientation to societal needs, and student personnel services.

The report now made of the conference is actually an "elements" presentation and makes no pretense to be either complete or definitive. So much was presented, so much discussed, so much evaluated in the entire field of occupational education on the community junior college level that to print it all would require a document longer than either fiscal resources or attention-holding readability allows. Thus, this report focuses attention on the major presentations that provided resources for the discussions, and the summary recommendations that came from the participants themselves.

In education today, semantics may indeed be a problem. "Technical," "occupational," "vocational," "terminal" education—what have you? We have attempted to be consistent, both in title and text, by following Norman C. Harris' definition of the area of education concerning the conference by using the word "occupational": "Occupational education refers to any and all education and training offered by junior colleges aimed at preparation for employment, as distinguished from curriculums in the liberal arts, the fine arts, or the humanities. Occupational education covers professional, semiprofessional, technical, and skilled-level curriculums for all fields . . . of employment."

Kenneth G. Skaggs
Specialist in Occupational Education
American Association of Junior Colleges

INTRODUCTION

The field of occupational education represents a topic that is both promising and perplexing. It is promising because of the tremendous need for technically trained personnel in a society involved in the throes of accelerating technological revolution. It is promising because of the desire of the rapidly growing junior college movement to share in the responsibility for meeting the needs of an automated society. At the same time, it is perplexing because many junior colleges are experiencing difficulties in initiating new programs and in maintaining those already in existence at an appropriate level of efficiency.

There is a need for all the expertise that the field of occupational education has developed to be brought to bear on the identification and resolution of problems inhibiting the expansion of programs at the junior college level. In response to this need, the Midwest Technical Education Center in St. Louis, in cooperation with the American Association of Junior Colleges, convened a national invitational conference May 12-14, 1966.

To assist in planning the conference, a group consisting of M.T.E.C. staff members, plus Kenneth G. Skaggs, Ken August Brunner, Norman C. Harris, Robert E. Kinsinger, and F. Parker Wilber participated in a planning session in February, 1966, at which time the following objectives were outlined:

1. To take a major step in the direction of confronting and resolving problems being faced by junior colleges in the field of occupational education;
2. To identify and bring together from across the country a group of outstanding leaders in the field of occupational education so that colleges might know to whom they could turn for assistance with problems involving development and evaluation;
3. To inform educational leadership at all levels of the outcomes of the conference and of available resource agencies in the field of occupational education;
4. To focus attention upon the junior college as a leader in meeting the nation's technical manpower requirements so that both private and federal agencies would increasingly place their resources at the disposal of such institutions to assist them in their efforts.

The organizational framework for the conference provided for the identification of issues relating to four broad areas involving, respectively, the relationship of occupational education to society, college administration, curriculum and instruction, and student personnel services. Nationally recognized authorities were asked to deal with each major area. Their addresses, along with a summary of recommendations of those attending the conference, constitute the body of this publication.

This report is published with the hope that the same sense of urgency and of high purpose which imbued those in attendance at the conference may be preserved and shared with those whose interest and leadership are critical to the expansion and improvement of technical education.

The support of the Carnegie Corporation and the W. K. Kellogg Foundation in making this conference possible is gratefully acknowledged.

Richard C. Richardson, Jr.
Conference Director

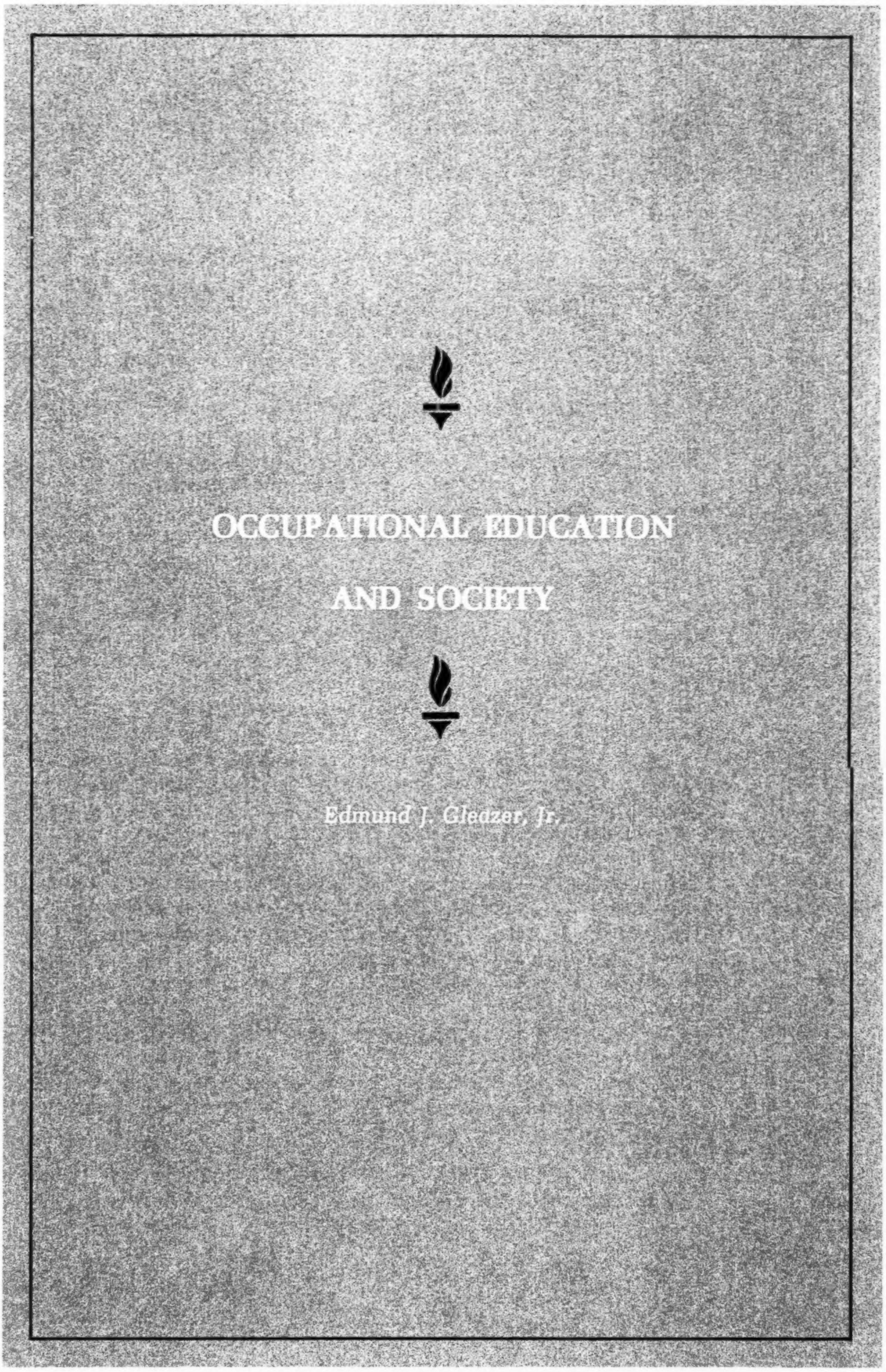
1 Occupational Education and Society
By Edmund J. Gleazer, Jr.

17 Occupational Education and Administration
By F. Parker Wilber

39 Curriculum and Instruction in Occupational Education
By Norman C. Harris

63 Student Personnel Services for Occupational Education
By Clyde E. Blocker

79 Recommendations



OCCUPATIONAL EDUCATION AND SOCIETY

Edmund J. Gleazer, Jr.

OCCUPATIONAL EDUCATION AND SOCIETY

Edmund J. Gleazer, Jr., Executive Director
American Association of Junior Colleges, Washington, D.C.

Ask almost any professional in the field of community college education what bothers him most and he will tell you that it is the low prestige of occupational education. In this country, and in many countries abroad, the university, with its baccalaureate programs, is the desired educational objective. Technical programs are chosen often reluctantly as second-best options.

In 1963-64 sixty students from Kenya were brought to this country under a program sponsored by the African-American Institute and the American Association of Junior Colleges with support from the Agency for International Development. They enrolled in occupational programs in junior colleges in New York State and Southern California and returned home after two years to take up the jobs for which they were trained. A large number of the students wanted to change their previous commitment and go on to a four-year program. And you couldn't blame them, because the society in which they lived had not established a place of prestige for the graduate of these two-year programs. Our culture has demonstrated the same reluctance.

The fact of the matter is that the vast potential of the community college is not being fully used in the field of occupational education. The purpose of this paper is to deal with the problems and inhibiting factors that transcend the local institution, being rather a part of the social context in which the institutions function. While an exhaustive examination of all such problems would require far more space than the scope of this paper permits, it seems essential to deal with the following four major issues:

1. How can social attitudes concerning technical education be improved? Or to put it another way: How can the prestige level of technical education be raised?
2. How can technical education be made responsive to a rapidly changing society?
3. How can the potential users of technicians be moved to utilize them effectively?
4. How can those in the field of technical education communicate better with the broader fields of education, government, business, industry, labor, and the professions?

Attitudes Toward Technical Education

Recently community colleges have been established in large cities. It had been expected that many students from underprivileged families would enroll in occupational programs. The results have been disappointing because these students who wish with such fervor to move up the economic and social ladder are not convinced that the occupational or technical routes facilitate their progress.

Terminology has often been responsible for downgrading of technical education. Familiar phrases to this group are "less than college-grade," and "less than degree-length." People, particularly young people, appear to have some antipathy toward something which is described as "less than."

The United States Office of Education has not included persons enrolled in occupational programs in its annual fall enrollment figures nor has it counted persons who have received the associate degree in its statistics of degrees conferred. Such procedures convey, intentionally or not, the view that occupational programs which do not lead to the bachelor's degree are not part of the higher education enterprise.

And have you ever heard a remark like this one? "John is not a strong student. An occupational program is about as much as he can handle."

Differentiation between occupational and transfer students appears to rest upon whether they are weak or strong students. The student who does not intend to transfer to a four-year institution gets the impression that he is of lesser ability and carries the stigma of incomplete or inferior education.

How many high school counselors discuss with their students the appropriateness of technical programs in the community college? Is not the "quality" of the high school—and, incidentally, the counselor—often thought to be judged in terms of the number of students who move into four-year programs in traditional colleges?

College and university representatives visit high schools to recruit students. Are these prospective students given information about the advantages, the rewards, the values, of technical or occupational curriculums in community colleges which lead directly to employment?

How many foundations have established scholarship programs for outstanding students in technical fields, similar to the MA3 program of the Ford Foundation or the Woodrow Wilson fellowship program? What foundation or government-supported program for either the student or for teachers in these fields has given indication that the leadership of either government or the foundation is convinced that these fields of study are important? There is still some truth to the adage that where your treasure is there will be your heart also. Up to this date the treasure has not been evident and the question is naturally raised as to the inclinations of our society's heart.

By what actions have leading national associations in education indicated high value judgments of technical education? The American Council on Education took its first step in this direction with the commissioning of a study by Grant Venn. The National Commission on Accrediting has encouraged a study of specialized accreditation as it affects occupational education. These are but two examples which come to mind of efforts by the national educational establishment to recognize and dignify the field of occupational education.

And one other illustration of the problem of the stereotype of college attendance as it relates to the suitability of occupational programs for many students may be added. The Advertising Council's long-time public service effort to motivate people to give to the college of their choice was of necessity broadly representative of the college community. But the picture which was indelibly formed in the minds of the millions who heard or saw the constant reminders of the need for colleges in our society was the four-year institution. The baccalaureate offerings came through as the desirable goal. No reference was made to the fact that *for perhaps two-thirds of the high school graduates an associate degree was a more appropriate initial objective.*

What has been done about this problem nationally? Under a grant from the W. K. Kellogg Foundation, a national advisory committee to AAJC was established in 1962. The membership included national leaders in business, industry, education, labor, and government. The first problem to which the committee chose to give its attention is the one we are discussing. As a result of its work a statement—*A National Resource for Occupational Education* [1]—was published and widely distributed.

Social attitudes can be changed. Changing circumstances can often change society's perceptions. A few years ago neither mathematicians nor astronomers had prestige in America. Sputnik, the computer, Cape Kennedy, and national security changed that. Foundation and government appropriations gave tangible evidence in the billions of dollars that not only these scientists of former dim luster but a thousand other kinds were essential to survival. And the message is driven home every time one of those birds in Florida or in California is launched.

Assuming that it is good public policy for a much higher proportion of America's high school graduates to enter occupational programs and that increasing the prestige of these fields will be a persuasive factor, I have these proposals to make:

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[1] National Advisory Committee on the Junior College. *A National Resource for Occupational Education.* Washington, D.C.: American Association of Junior Colleges, 1964.

1. Stimulate through educational efforts with both high school and community college counselors the concept that the occupational program prepares for job entry. A lifelong commitment is not necessary to the field. Indeed, education and training will be lifelong. Educational resources will be available when the individual is ready for additional or changed training.

2. Urge curriculum planners to devise open-ended, broadly based programs so that the student can maneuver within his field as his interests and objectives change.

3. Encourage national foundations to establish programs which recognize the worth of both the teacher and the student in technical fields. The W. K. Kellogg Foundation and, most recently, Ford Foundation have taken steps in this direction. Ford Motor Company Fund has initiated a scholarship program for students in automotive technology. A multiplying of these commendable efforts is needed.

4. Work with counselors so that they talk with students and teachers and parents in terms of different kinds of ability rather than gradations of ability. Some occupational programs require academic abilities quite similar to those required of the transfer liberal arts students. Others require capabilities in manipulative skills sometimes not possessed by the student who is strong in abstract and verbal reasoning ability. There exists a spectrum of types of intelligence, aptitudes, capacity, motivations, interests, across the whole field of occupational programs as broad as that required for the variety of baccalaureate programs in the university. It is not accurate to think in terms of two categories with interchangeable titles, i.e., the good students viz. transfer students and the poor students viz. technical students. An avoidance of these pitfalls would do much to elevate the social status of the occupational student.

5. Urge the United States Office of Education to recognize the validity of the associate degree as representing two years of collegiate level study which does not necessarily lead to transfer and a baccalaureate objective. Urge U.S.O.E. to include students in organized occupational curriculums in the fall enrollment figures as well as in the yearly reports. There are problems of comparability with data for previous years but technical difficulties should not be justification for continuing an error. Urge U.S.O.E. to utilize terminology which recognizes these programs as worthy in their own right. Eliminate definitions or terms which suggest that the baccalaureate program is the only point of reference.

6. Encourage the American Council on Education to recog-

nize the social worth and the appropriateness of technical education, through its Commission on Federal Relations, its Commission on Administrative Affairs, its Commission on Academic Affairs, and its Commission on International Education.

7. Establish a program of public interpretation of the value of occupational programs in the community college. The stereotype of the four-year degree as an almost universal objective must be changed. For most high school graduates it is obviously not a desirable initial objective. A campaign through radio, the press, and TV similar to the Advertising Council's project with the Council for Financial Aid to Education is justified.

Making Technical Education Responsive to a Changing Society

"A year from now you'll look back on these job specs and laugh." That was the boldface caption for a full-page ad by General Electric in the *Washington Post* a few weeks ago. Specialties were described under such job classifications (usually with subclassifications) as:

- circuit design
- computer systems
- simulation
- programing
- radar
- information systems
- underwater missiles systems
- guidance systems
- flight control
- systems analysis
- weapon systems
- quality control
- radar components
- components
- sonar
- signal processing
- optical
- reliability
- microwave
- mechanical engineering
- instrumentation
- spectroscopy
- field engineering
- human factors
- microbiology
- biochemistry
- bacteriology

These were the manpower needs of the General Electric Defense Electronics Division.

Other harbingers of rapid change are found in the recent issue of the *Occupational Outlook Handbook* along with indications that during the next ten years the fastest growing job field will be professional, technical, and kindred occupations:

Personnel in these areas will be in sharp demand as the Nation explores new approaches to education, bends greater effort towards America's socio-economic progress, urban renewal, transportation, harnessing the ocean, enhancing the beauty of the land, and conquering outer space. Today, thousands of men and women are working in fields that were little known only *a decade ago—cryogenics, bionics, ultrasonics, microelectronics. The quest for scientific and technological knowledge is bound to grow, thus sharply boosting the demand for both specialists and those who can function effectively in several fields. The next decade will see a new emphasis on the social sciences, and educational and medical services.*[2]

The pace of change poses real problems for technical education. What will be the manpower requirements five years from now? Ten years from now? How can teachers be prepared, facilities planned, curriculums developed, students counseled unless there can be better forecasts than now exist?

In a recent study of student personnel programs[3] in junior colleges, Max R. Raines found that the weakest elements in the junior colleges with the best student personnel services were occupational counseling and placement services. Both of these represent points of contact with real life conditions in the employment fields. Such deficiencies strongly suggest that there is a lag between the educational experience of the student in the classroom or shop and the requirements of the job into which he is moving.

And one other clue to the existence of this critical problem can be supplied. Roger H. Garrison, in a year-long study of the junior college faculty member, finds that the greatest concern of the teacher is that his "intellectual capital" is not being replenished. I am sure that this group would understand that teachers in the various technologies also need "intellectual capital." Some of this consists of a knowledge of the requirements, changes, concepts, personnel, and literature in the occupational field in which he is teaching. And the chances are that he is not able to keep up.

Some assistance has been developed but it has been limited. The National Science Foundation provides some summer institute programs. A few corporations have made it possible for teachers in some of the industrial technologies to have summer employment in their plants. But on the whole there has been no systematic, organized program by which the community college is kept tuned in on change in the occupational fields.

A word should be said for the value of advisory committees. I had the privilege of addressing several hundred members of the advisory committees to the occupational programs offered by Los Angeles Trade-Technical College. I was impressed by the evident identification with college programs ranging from plastics to chef training to aircraft mechanics.

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[2] United States Department of Labor. *Occupational Outlook Handbook*, Bulletin No. 1450. Washington, D.C.: U.S. Government Printing Office, 1966-67. pp. 15-16.

[3] Raines, Max R. *Junior College Student Personnel Programs, Appraisal and Development*. Washington, D.C.: American Association of Junior Colleges, 1966.

I have these suggestions for action:

1. Step up efforts to identifiy, recruit, and prepare administrative leadership for community colleges. The community college must be sensitized to its environment. A kind of perpetual inventory must be maintained of manpower needs and developments. But this is not a matter of knowledge alone. It is also a product of a posture, a point-of-view, sensitivity, and perception. There is required a high order of administrative ability to establish communication with the environment of the college as well as to see to the organization of a system of intelligence which will provide information necessary for indicated change.

2. Greatly expand the few efforts now extant for identification, recruitment, and preparation of teachers in the occupational fields. Such activities should involve colleges or universities with graduate programs, community colleges, and the occupational community. The Junior College District of St. Louis-St. Louis County is initiating such a program under Ford Foundation support. This Midwest Technical Education Center was established toward a similar end by the Carnegie Corporation. The W. K. Kellogg Foundation has provided funds for teacher preparation in the health-related fields. But all of these efforts to date are a token effort in the face of the need which exists. Not only are foundation funds needed, but the federal government should underwrite the preparation of thousands of the qualified teachers needed. Federal measures have been limited largely to graduate fellowship programs that move the teacher into university or college teaching or qualify the teacher for elementary and secondary teaching.

3. Explore, with the cooperation of occupational representatives, the feasibility of expanding such programs as General Electric has had for some years in connection with Syracuse University. These summer institutes are designed to acquaint high school guidance personnel with actual conditions in industry. The G.E. plants at Electronics Park have been used so that the counselors get a realistic and up-to-date view of job requirements in this day of rapidly changing technology.

4. Urge occupational groups (employers) to provide either summer working opportunities or leave-of-absence jobs so that teachers in occupational education have frequent experience in the field for which they are preparing personnel.

5. Work with occupational fields toward an arrangement

similar to that of the visiting scientist under N.S.F. funds whereby it is possible to arrange for a competent representative from an occupational field to spend two or three days or even a semester in residence at the institution or in visits to a series of institutions. This procedure has worked well with physicists, psychologists, chemists, etc. It would be equally helpful if it included representatives of employers in the semiprofessional and technical fields.

6. Encourage the Department of Labor to expand its services in regional and local manpower studies and to keep such information current and available to institutional planners.

7. Greatly expand "work experience" programs. The community college, located as it usually is in a city, has a built-in asset in its proximity to the occupational life of the community. In some community colleges 60 per cent of the students are working part-time. There are distinct advantages to their working at jobs related to their teaching. Good planning and coordination are required. However, not only are there distinct values to the student from the standpoint of on-the-job experience which gives realism and motivation to his work; there is the added value of assuring that the college program is tested daily in the actual work setting. We should give consideration to a dramatic increase in work experience programs.

Moving Potential Users of Technicians to Utilize Them

We have been concerned that employers have demonstrated either reluctance to utilize technician personnel or have not known how they can be utilized. This situation is changing rapidly. Effective and efficient utilization of resources often is correlated with scarcity of those resources. The tremendous assignments ahead of society demand utilization of people in accordance with their training. The various health fields offer a vivid illustration of what will happen in other occupations. In a report to the American Association of Junior Colleges, Robert E. Kinsinger put it this way:

> *The lone practitioner of medicine is an anachronism, as is his counterpart in other professions. The knowledge explosion has overwhelmed the professional and escalated his responsibilities. Increasingly, he analyzes, plans, and administers services which are provided by others—others to whom he delegates, in large measure, routines carried out under his direction. The "others" are technicians and assistants. In medicine and dentistry, the list of supporting technicians is long. Some of the names are well-known—such as medical laboratory technicians, x-ray technicians, opticians, inhalation therapy technicians, and dental hygienists. Others, many others, are doing the work, but*

their role as medical and dental assistants is less well developed. For some we lack even names. They not only assist the physician and the dentist, but, in this exploding field of knowledge and service, there is need for technical assistance for the professional nurse, the physical and occupational therapist, the medical record librarian, the dietitian, and many others.[4]

The American Association of Junior Colleges has joined with the National Health Council, which represents some seventy health agencies, to further a close working relationship between health practitioners and educators in the junior college field and to facilitate and stimulate the development of education programs in the health and technological fields.

A short time ago I received a letter from the executive director of the American Society of Planning Officials expressing the view that semiprofessional personnel were urgently needed:

> *In recent months the American Society of Planning Officials has received considerable evidence that local government agencies concerned with planning, housing, urban renewal, code enforcement, traffic and highways, environmental health and other urban problems, are in need of trained personnel to perform jobs at the semiprofessional level. The need is particularly great in planning agencies. . . . We would urge that as quickly as possible a project be gotten underway to inform junior colleges throughout the country of the enormous potential for career opportunities in planning and urban development offices, the types of skills required, and the suggested curriculum for this type of career. We are anxious to cooperate with you. . . .*
>
> *A corollary need which we would like to give attention to as the project develops would be an analysis and identification of the variety of tasks that could be performed by semiprofessional personnel (even though now performed by professionals) and preparation of "model" job descriptions, classifications, titles, and salary levels.*

Under a grant by Sears-Roebuck Foundation, AAJC and A.S.P.O. cosponsored a conference to begin joint explorations in the educational fields involved. Now the focus is broadening toward what might be described as an "associate degree in urban administration."

It is apparent that there has been a notable change in the employer's view of the semiprofessional or technician as the pool of qualified manpower has shrunk in proportion to society's demand for services.

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[4] Kinsinger, Robert E. *Education for Health Technicians—An Overview.* Washington, D.C.: American Association of Junior Colleges, 1965. p. 11.

A final illustration may serve to drive the point home. A representative of the International Association of Chiefs of Police has told us that, because of the great pressures developing among law enforcement officers for upgrading, the community college is being looked to for assistance. AAJC is urged to join with I.A.C.P. in bringing together law enforcement agencies and junior college representatives to plan suitable educational programs.

Potential users of technicians are looking toward persons so trained, with real hope. These appeals for help from employers represent a dramatic change from a period of a few years ago when it was difficult to stir up interest in the role of the technician. Now the question deals with their effective utilization.

Here are a few proposals for action (incidentally, some former comments also will have relevance to this concern for utilization):

1. Establish a working relationship with employers and their organizations. Robert E. Kinsinger hit the nail on the head in his recent report on technicians in the health fields when he said: "No project that hopes to propose and develop innovations in the health field can hope to reach its objectives without a working relationship with a number of these groups."[5] He was referring to the complex system of professional associations, organizations representing health service facilities, voluntary health groups, and federal agencies. Other occupational fields have similar systems of organization within which they function.

2. Encourage training institutions to provide for working relationships between the professional and the technician in the training process. Montgomery Junior College in Maryland has had support from the United States Public Health Service for a program to prepare dental assistants. These trainees have worked with the dental students at Georgetown University. Dentists graduating from that institution want dental assistants and know how to utilize them. Could these procedures be adapted to other fields?

3. Establish well-organized work experience programs. Some advantages of this kind of educational experience have been mentioned. Additionally, the shared effort required of institution and employer will result in utilization of the technician along the lines of his training.

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[5] Kinsinger, Robert E., and Ratner, Muriel. *Technicians for the Health Field: A Community College Health Careers Study Program.* New York: University of the State of New York—State Education Department, 1964-66.

More Effective Communication wtih Education, Government Business, Industry, Labor, and the Professions

We must not spend our time and energy taking up the cudgel to an enemy which may no longer exist. There are problems, as we have seen, but the pressure of the environment is forcing changes and a new strategy is needed to meet new conditions. It is clear that publicly supported educational opportunity for all in this country will soon include two additional years beyond high school. And, as Frank Bowles of the Ford Foundation has said recently, this does not mean "more of the same. It is the process of increasing the capacity of an educational system by adding opportunities for study, to accommodate students who have heretofore been unable to find programs to suit their needs. It is not just educational improvement. It is social change."[6]

The kind of educational programs we are discussing are a part of the change. The National Commission on Technology, Automation, and Economic Progress, established through an act of Congress in 1964, presented its report to the President and members of Congress a short time ago. Among recommendations dealing with education was one which described the kind of institutions we are discussing here:

> *The key institutions would be area technical schools and community colleges. . . . The two types of schools might in many instances be merged into community education centers offering both the theoretical foundation of trade, technical, and business occupations and the opportunity to "learn by doing" while pursuing a liberal education or semiprofessional training.*[7]

The tide is obviously running in the direction of our interests. A diversification of education beyond the high school is called for. The society in which we live is demanding services which can be provided only by a broader spectrum of occupations. The world of occupations is saying to the community colleges of the country —send us people not only qualified as technicians but as persons. A careful analysis of the field of our concern today leads to a grim but inevitable conclusion that the center of greatest resistance to fulfillment of community college potential in technical education is in the educational community itself.

With all of its advantages of proximity to the high schools of the community, the junior college as a whole has not done a good job in communicating with these institutions. Perhaps there has been a fear that the collegiate institution might be viewed as a "glorified high school" if the relationship was a close one. For whatever reason, the high schools and community colleges which have established effective articulation are exceptional. And this is particularly true in regard to reaching the student who will choose an occupational program.

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[6] Bowles, Frank H. Address presented at National Conference on Higher Education sponsored by Association for Higher Education, Chicago, March 14, 1966.

[7] National Commission on Technology, Automation, and Economic Progress. Report, *Technology and the American Economy*, Volume 1, Washington, D.C.: Government Printing Office, 1966.

Another high wall appears to exist between occupational programs in the community college and the vocational programs in secondary education. As vocational education has moved to post-secondary levels in many fields, a spirit and organization for communication between the secondary vocational educator and community college personnel generally has not been developed. This is often true at local levels, frequently at state levels, and even at the national level. Incidentally, another aspect of this problem of communication may exist between the "academic" and occupational personnel on the same college campus. Common interests are only beginning to be recognized.

We cannot leave the problem of communication without some reference to the university or four-year college. A great deal has been done in articulation between two-year and four-year institutions for the purpose of facilitating transfer. But little has been done to develop mutual understandings in regard to the occupational programs of community colleges. Very few universities prepare teachers or administrators for this educational function. A number of universities were contacted by a staff member of AAJC a few years ago to ascertain interest in stepping up efforts to prepare junior college teachers. There was enthusiasm for programs to prepare these teachers—if they were to move toward the doctorate and teach the transfer-type courses. But, in general, graduate deans were not at all sure that faculties could be persuaded to have an interest in preparing teachers for semiprofessional and technician-type programs. And the question is still put to junior college people by their colleagues in the four-year institutions and universities when controversial issues arise such as specialized accreditation and professional ranking and academic senates: "Do you want to be considered higher education or not?" The notion appears to be, either you emulate the university in your policies and practices and programs or you are not of the fellowship of higher education and, if not of this fellowship, then we cannot understand each other. Perhaps these are harsh words, but, regrettably, communication has been so deficient that the description has a basis in fact.

I have said enough to reveal my conviction that the greatest communication problem technical education personnel confront is in their own educational fraternity. Here, in long existing concepts, definitions, terminologies, academic structure, prestige symbols, lie the forces most resistant to the full emergence of technical education in the junior college. Recent problems with federal enactments would not have occurred if higher education had spoken out with a clear, confident, and understanding voice about specialized accreditation as it applies to occupational programs. Business, industry, labor, and the professions are in general taking initiative in this field—urging the community college to respond. Union Electric, located in St. Louis, advertised in the *Wall Street Journal* recently: "St. Louis Grows in the Strategic Center of America—New Junior College to Meet Industry's Manpower Needs. The growing manpower needs of industry and business will have a new and continuing source of technicians and skilled men and women."

If a big part of ineffective communication is in the educational realm, what action can we take? I suggest, in approaching possible solutions, that we think about communication as having its basis in shared experience. Words come to have similar meanings if they are based upon common experience. A popular song of some time ago said it pretty well—"Getting to know you." Perhaps this sounds like an oversimplification or at least trite but solutions are often simple. Here are some proposals:

1. AAJC and the American Vocational Association could hold a series of conferences to examine common interests and problems looking toward cooperative activities where appropriate.

2. In each community college occupational education personnel could take initiative in arranging regular meetings with their secondary school counterparts for exchange of views, information, and advice toward improved communication.

3. Establish a working relationship among talented people from the occupational fields, the universities, and community colleges to give sustained and organized attention to new curriculums in the occupational fields. A prototype of the scale of this effort can be found in the new approaches formulated to physics and mathematics during the past few years. My concern is with improved curriculums but also with the quality of interaction which could take place among the personnel involved. This would be one way to identify and utilize a cadre of outstanding leaders.

4. Improve the use of advisory committees. The most significant kind of communication for the community college is at the local level. Some institutions have done this well. Many need assistance so that such groups are more than "window dressing." A strong advisory committee for each occupational program ought to result not only in a realistic and up-to-date curriculum,

but in effective interpretation of the college to the community and of the community to the college. Placement and follow-up, two essential tasks, are further facilitated through such committees.

Conclusion

The purpose of this paper has been to stimulate thought and discussion concerning some of the societal issues confronting improved implementation of programs of technical education. Since we all observe from different platforms, it is likely that some will disagree with the opinions expressed. Let us bear in mind, however, our common concern that appropriate educational opportunity beyond the high school be provided for all those who can benefit from it. In our society the individual's sense of worth and identity is inextricably interwoven with his vocation. At the same time, providing individuals with satisfying vocations has profound implications for our society. As we continue to examine and debate these issues, let us always seek to improve the quality of our work by remembering that our aim is not consensus but competence.

OCCUPATIONAL EDUCATION AND ADMINISTRATION

F. Parker Wilber

OCCUPATIONAL EDUCATION AND ADMINISTRATION

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In the light opera, "Fiddler on the Roof," the story-theme unfolds about a Jewish-Russian family turning away from the worn roots of the past. The father is the leading character and a traditionalist. The family lives in the town of Anatevka, where tradition is everything. "Without our traditions," says Terya, the father, "our lives would be as shaky as a fiddler on the roof."

It may be that the roots of tradition are not as deep now as they were in Terya's Russian village of Anatevka in 1905. However, as we know, cultural traditions both rise and die slowly; as surely as the processes of education contribute to perpetuation of society, education also contributes to social-cultural lag.

Historically, in the junior college movement, there are innumerable debates between the philosophical defenders of the "tradition" of liberal arts and others who would turn away from these roots and introduce instruction in technologies (occupational education).[1] There is undiminished reluctance on the part of some liberal arts traditionalists to concede that there are worthwhile values in occupational education to students beyond the monetary ones. A few vocational educators compound the issue by minimizing the contemporary importance of traditional education. They irrationally suggest that vocational-economic skills are sufficient to the students' needs. Neither of these extreme philosophic educational positions is popular.

The apparent trend in junior colleges is to the comprehensive curriculum including vocational-technical curriculums leading to occupational employment. As junior colleges increasingly break with traditions, they need not become "as shaky as a fiddler on the roof." One national leader, John Lombardi, who has experienced at firsthand the evolution of the junior college movement states his convictions in the form of a creed:

I believe that the future of the junior college depends on the maintenance of the comprehensive concept which includes a wide variety of occupational or vocational, or trade courses and curriculum or combinations and the lower-division courses and curriculums. This, to me, is the essence of the junior college. If the

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[1] Brick, Michael. *Forum and Focus for the Junior College Movement.* New York: Bureau of Publications, Teachers College, Columbia University, 1963. pp. 111-112.

junior college is to be some other kind of institution, then we should substitute some other word for "college." [2]

Those administrators who may be doubtful of whether the two-year college should be unhampered by conventional notions of what constitutes higher education should be encouraged by one of the conclusions to Medsker's study of junior college faculty: "The fact that two-thirds of the staff believe the two-year college should disregard tradition in higher education would appear to make it easier for junior colleges to develop programs less orthodox than those of four-year colleges, and this would have a bearing on programs for general education and vocational education." [3]

Seemingly, the majority of junior college faculty are not as "shaky as the fiddler on the roof" as they depart from traditions.

Administrative Organization

It is obvious that the administrative structure of the college must be designed to promote balance and to effectively achieve the varied educational purposes of the institution. Determination by the president and deans of the administrative structure affects the functioning of the entire institution. Most significantly, organizational structure determines the scope and services of technical education available to the students.

Full consideration of the ultimate effect of the structure upon educational opportunity to the occupationally oriented students is neglected. Most junior college structures result in domination of the organization by the university transfer function.[4] If technical-vocational education, student affairs, and community services are as vital as the transfer program (university parallel program), they must have equal organizational status in order to prosper.

College presidents do not have the time or experience with industry, business, or agriculture to enable them to direct the diverse details involved in managing the operation of occupational education programs. Consequently, this responsibility is normally delegated to a qualified, technically oriented administrator who undertakes the specialized task of building a program tailor-made to the community. This administrative person may be called a vice-president, director, or dean for technical education. He will formulate courses and procedures to meet the needs of the area for which the occupational training is given. Such a specialized administrator will determine what program should be promoted, whom to contact for cooperation, and how to coordinate these complex programs.

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[2] Lombardi, John. "Emergent Issues in Junior College Administration." *Emergent Issues in Community College Administration in Our Changing Society*. Conference sponsored by University of Washington, Seattle, May 1964. p. 55.

[3] Medsker, Leland. *The Junior College: Progress and Prospect*. New York: McGraw-Hill, 1960. p. 180.

[4] Blocker, Clyde E., Plummer, R. H., and Richardson, R. C., Jr. *The Two-Year College: A Social Synthesis*. Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1965. p. 179.

Many more colleges could justify the appointment of an administrative vice-president, director, or dean with the defined authority encompassing the occupational training areas of the college. Colleges that serve county regions or large urban areas with diversified occupational training needs and thousands of prospective students, have particular need for this type of specific administrative leadership; in smaller community colleges, an assistant dean or division coordinator may handle these necessary responsibilities for the dean of instruction.

The chief administrator responsible for policy and operation of the technical educational program regardless of title should occupy a position at the top echelon of administration: it is essential that his authority be commensurate with assigned responsibilities. Although his title is helpful to his success, his place in the structure of the organization is even more important. Any occupational program directed by an administrator at the third or fourth staff level in the organizational structure has been predetermined by the president to be a secondary or tertiary function of the college. In this event, both the program administrator and the technical faculty will soon "learn their place" in the hierarchy of the organization; they will receive only indirect representation in administrative councils, inadequate budgets and limited administrative concern or support.

Organizational purposes associated with the college must necessarily be examined periodically and decisions must be made regarding them, particularly with respect to the occupational programs. Also, translation of specific purposes from philosophy into action demands planning of precise procedures, division of responsibilities and task assignments; these are always subject to scrutiny in the light of changing conditions and changing personnel.

The external socio-technological changes and information amount to types of pressures that modify either the technical education division purposes or the procedures for accomplishing them. Consequently, the chief administrator must be sensitive to the need to periodically interpret the technical division goals, and the roles of the coordinators and teachers to all other personnel so that hopefully all these individuals may harmoniously accomplish their own aspirations as they, at the same time, accomplish the designated institutional goals.

To activate the organizational purposes through effective communications and participation requires management skills on the part of the chief administrator. Both the president and the director for technical education must distill "purposes" into specific departmental objectives and make determinations required by two major types of problems: deciding what is to be done (purposes) and how it is to be done.

Traditionally, goal determination and role allocation are two major functions of the chief administrator, although some faculty challenge this. These crucial administrative decisions are not once made, then forgotten. They must be re-examined often. The chief administrator and directors or deans of technical education must perform these functions as often as changes in external forces, changes in technology or personnel demand it. Normally, the chief administrator, upon recommendations of associates and faculty, makes the initial decision whether purposes or organizational roles will be examined, when it will take place, and who will be involved in the evaluation.[5]

Role of the President

The chief administrator is not only director of the organization's energies but he serves as the mediator of personnel and as the public relations bridge between the college organization and the community or area being served. He holds high hopes that, through wisdom, he will maintain balance between the institution's integrity and effective interaction with the changing social and economic environment of the community: unlike the universities, he cannot afford to let the local junior college become an island, for it cannot long survive in community isolation.

One authority states that educational leadership is the president's prime function: "We believe that the president must preserve his educational leadership, that it must indeed be enhanced further. . . . We believe that implicit in the office he holds is the duty to participate actively in framing and carrying out the teaching and policies of his institution."[6]

Some feel that the college president is no longer the prestige figure he once was, just a "manager, skilled in administration, a broker in personnel and public relations."[7] However, Phillip Selznick believes the president has an essential role of leadership if the organization is to function effectively with the required four concepts: (1) a clear definition of institutional objectives; (2) a clear embodiment of institutional purpose; (3) effectual defense of institutional integrity; and (4) effective ordering of internal conflict. In this organizational environment, the junior college president's role is more than a manager—he is a mediator, agent for change, power figure, and decision maker.[8]

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[5] Parsons, Talcott. *Structure and Processes in Modern Societies*, The Free Press of Glencoe, U.S.A. 1963. pp. 19-23.

[6] Dodds, Harold W. *The Academic President-Educator or Caretaker*. New York: McGraw-Hill Book Company, Inc., 1962. p. 2.

[7] Stokes, Harold W. *The American College President*. New York: Harper & Row Publishers, 1959. p. 15.

Most certainly, the comprehensive community college has emerged with a need for presidents who can give imaginative and versatile leadership. The president plays many roles, the "role of educational leader, as community leader, and as executive of a complex enterprise with many facets of management relating to personnel program, plant, finance, and public relations." [9]

The junior college president's leadership, like that of the four-year college president, is "infinitely more difficult than the task in a more authoritarian, more monolithic business firm, governmental agency or military unit." He must achieve consensus among individuals within and without the institutions, with widely varying values. And, in doing all of this, he has "less power to direct, . . . less clearly stated goals, and less opportunity to relate tangible results to proposals than his contemporaries in business and governmental enterprise."

One of the chief skills of the junior college president should be his ability to use the consultative process. His success with technical and trade personnel may well be related to his belief in the principle of consultation and his skill in its practice.[10] Through experience he learns that issues tend to be resolved better by consensus than by dictum. The president will "patiently continue to talk and consult on major issues while consensus is building up." [11] A wider sense of ownership in the decisions and a more direct responsibility for carrying them out on the part of technical education faculty are both worthwhile results.

In the future the junior college president's role may become more like that of the president in the university—"to coordinate for the accomplishment of common purpose the efforts of many persons, each more learned in some direction than himself; to be sympathetic toward both people and ideas; to try to preserve a just balance among the institution's several commitments . . ." and "to persuade rather than to command; to lead . . . but never to boss."

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[8] Selznick, Phillip. *Leadership in Administration: A Sociological Interpretation*. New York: Harper & Row Publishers, 1962. pp. 62-63.

[9] Henderson, Algo. *Policies and Practices in Higher Education*. New York: Harper & Row Publishers, 1960. pp. 219-220.

[10] Woodburne, Lloyd S. *Principles of College and University Administration*. Stanford, California: Stanford University Press, 1958. p. 24.

[11] Capen, Samuel P. *The Management of Universities*. Buffalo, New York: Foster & Stewart Publishing Corporation, 1953. pp. 79-80.

Role of Vice-Presidents, Directors, or Deans

Vice-presidents, directors, or deans of occupational education who carry the functions at the top policy-making level are faced with the reality of functioning in a sometimes hostile faculty environment. Their titles and functions represent areas of incompatibility between the maintenance of law and order that restrict the play of faculty individualism and permissiveness that is enjoyed by some creative, free-wheeling teachers. Technical-subject faculty members instinctively fear administrative dominance and diminution of their own participation in decision making, particularly when they believe there is a relationship to administrative plans for "economy" or "effciency."

The demands made upon the vice-president, director, or dean responsible for the college technical programs comprise both leadership and executive types of ability. A list of such duties might include:

1. Selection and recommendation of professional staff, including teachers; the organization of professional pre-service and in-service training
2. Direction and supervision of the total technical program including curriculums for full-time or part-time students; also for adults undergoing training or retraining
3. Continuous production, evaluation, and revision of courses to meet rapid changes in the college program or for curriculums under consideration
4. Initiating community occupational surveys and studies to keep the program reflecting the employment changes and job standards
5. Working cooperatively with advisory groups in the interest of coordinating the college programs with the local community or regional area
6. Cultivating the financial assistance, community support, and public acceptance for the relatively larger costs of operating occupational programs
7. Conducting and encouraging close relationships between many types of interested community groups and leaders who should be informed and cooperating
8. Actively engaged in articulating the college occupational program with other divisions and beyond the college with feeder high schools and supporting districts.

Other specific duties are required of the top administrator assigned to technical education, but these duties are more executive in character:

1. Determine and plan for purchase, installation, and maintenance of equipment and storage, control, and distribution of consumable supplies
2. Prepare budgets and make equitable distribution of funds to the various programs and services
3. Develop and revise instructional materials for diverse programs
4. Set up regulations and procedures for the orderly placement of occupational graduates and their follow-up in employment.

The administration of technical education at the two-year college level entails problems of special complexity and difficulty. These administrators of technical education must frequently have a higher degree of management ability than that needed for directing the relatively stable, pre-structured college transfer program. This fact must be taken into consideration as the administrative structure of the comprehensive institution evolves.

Coordinators and Teaching Faculty

Effective administration for technical education involves not only the top supportive relationship of a top level administrative dean but the appointment of subordinate assistants, directors, or coordinators in a large institution. Ordinarily, the technical staff is headed by a chairman for each related group or department of applied arts teachers, who is given about 20 per cent released time to assist his teaching staff. If this department individual is expected to follow up students after graduation into employment and spend much time working in the occupational field as a liaison between the college and the community, he may be designated as a coordinator of technology with a salary increment for his additional responsibility. It is usual practice to assign, at extra pay, either the departmental chairman or a coordinator to supervise each area of the applied arts in the evening college program. This helps insure commensurate practices and standards, both day and evening, in the same instructional department.

Faculty selected for staffing the technical programs are described as highly specialized, oriented towards their subject fields, and qualified by occupational experience. The curricular level or field of teaching may require varied amounts of education and preparation via work experience. Strict uniformity of standards is not feasible. Most junior colleges' technical education staff members will generally equate in ability and experience with specialized technical engineering, or middle-management supervisory personnel in business or industry.

In many urban two-year colleges, located in industrial areas, the teaching staff has usually been screened from numerous candidates; these individuals often represent a very talented group and are highly respected for their competence in their respective fields. Many of them practice as consultants to the businesses or industries of the area, an activity which brings added prestige to the college and its technical curriculums. They are often inspired teachers.

Traditionally, many state legislatures or state boards of education enact regulations affecting teachers and teaching certification. They intend such regulations to control "breadth and depth of subject matter" which they desire to be required of every teacher, as these affect excellence in education. If there is soundness in this argument for teachers of general studies, it pertains even more functionally to occupational instructors whose graduates are fed directly into the economic stream of the community and nation. In the absence of state regulations the college administration should set up their own screening procedures and minimal standards for selecting competent personnel to teach vocational subjects, whether business, agriculture, trade-industrial, or technical education. College personnel standards are tailored to fit the appropriate occupational requirements, including also minimum formal education, teacher training and acceptable work experience.

In the instance of occupational education instructors, the part-time evening teacher needs five or more years of full-time training and experience in the subject taught if quality instruction is demanded. The full-time teacher (day) would have as an ideal seven years or more of successful occupational preparation and experience. The general success of technical educational programs at the community college level is always directly related to maintaining high personnel standards and the growing recognition for occupational proficiency of occupational instructors.

A major function of administration is the proper selection, orientation, teacher training, supervision, and constant evaluation of teaching staff in the evening technical education program; many of whom are transitory. Involved in all of this is the obligation to operate the evening program consistent in standards with those offered in the day instructional program. Otherwise the college tends to deteriorate into two levels with unrelated, separate educational functions.

The technical education departmental chairmen or coordinators, through their supervisory work, come to know the ability, experience, and quality of instruction offered by part-time teachers in the evening college. Therefore, the part-time instructional staff becomes a foremost source of recruitment for adding or replacing day technology instructors.

One of the most successful procedures for recruiting teaching staff is to employ the interest, goodwill, and professional concern of the regular teaching faculty. They normally desire to fill the position with a competent individual who will reflect the reputation of the department and one whom they can respect. In most instances the faculty can locate personnel in transit, provide leads to consider, or make recommendations of specific former graduates, that culminate in securing qualified teaching personnel acceptable to the college. Administration should always realize that technical teachers have much dedication to their applied subject or field, perhaps more than loyalty to the institution; they work diligently to locate prospective teaching staff whom they consider to be professional equals, as their associates.

It is noteworthy that recruitment of technical subjects teachers has been successful when salaries have been raised to compete more favorably with private industry and their higher wages that prevail. At least one college now recruits engineers and technicians with as much as fourteen years' experience. In late years also because of the better public image of college occupational education, ample candidates required for vocational-technical teaching have been recruited, at least by colleges in metropolitan centers. Primary factors have been (1) the acceptance of the principle of equating each year of occupational experience, minus four years learning period, with teaching experience and (2) equating seven years of verified vocational experience with a B.A. degree for salary rating-in purposes; these two factors enable new "hires" to enter teaching with favorable salaries.

Capital Outlay: Facts and Figures

Augmented budgets for capital outlay—buildings and equipment—are vital in this period of junior college expansion. Occupational-technical programs include multilevels of occupational skills that typify employment in business, service occupations, or industry; this teaching requires specialized shops or laboratories that provide for both theoretical projects and realistic occupational experiences consistent with the objectives of the course. Unique, specialized facilities are designed for each occupational category and must include a well-balanced variety of modern equipment utilized in the world of work.

Capital outlay required for occupational education varies considerably but is always higher than for "pencil and paper" courses in the curriculum. In California junior colleges, on the average, the total construction and equipment costs are about

$3,200 per student station for nonvocational programs. In sharp contrast, it is not uncommon for costs of a vocational program to be about $6,000 per student station when building and equipment are consistent with technical standards of business and industry. In extreme instances, the cost of equipment alone may approximate $6,000 per student station in such technician programs as metallurgy, electronics, plastics, or engineering aide programs. More frequently, instructional equipment purchases for an occupational training program costs between $500 and $2,500 per student station—from 15 per cent to 75 per cent above the costs of nonvocational programs.

In order that a technical training facility may continue to be updated it is vital that there be a systematic, budgeted equipment replacement schedule. There should be a planned annual schedule for replacing outmoded and worn-out equipment. It is both educationally impractical and dollar-wise wasteful to retire a total laboratory or shop in any single year. Department chairmen or coordinators should recommend an annual item replacement schedule to the administrator of educational services. This schedule should be annually reviewed by the administration, based on such criteria as (1) estimated years of use, (2) cost of maintenance and repair vs. replacement costs, (3) limitations of educational value of older equipment, and (4) the advice and recommendations of advisory committee members who are experts.

It is conceded that training equipment receives undue and severe wear by student learners, as they are not proficient operators of equipment. Most training equipment is used several times daily and generally has a higher rate of breakdown and wear than if the same equipment were used in business or industry. Equipment replacement schedules used in industry are not useful or accurate guides for college planning. Beyond budgetary considerations, it is imperative that occupation-centered laboratories should never be allowed to become obsolete or include shoddy equipment, as this invites community criticism and rejection of the program by business and industry employers, parents, and by educators themselves.

It is believed that in consideration of capital outlay needed for the further development of technical education both local and federal funds must be employed because of anticipated programs and expansions into new technologies. It would be educationally unsound and unacceptable to community leaders to plan new campuses without modern laboratories and shops or to inadvertently allow existing occupational facilities to become obsolete.

It may be worth investigation to determine the advisability of renting or leasing equipment in certain situations, rather than outright purchase of all instructional equipment. It might be good budgetary practice to rent or lease training equipment when it will have a short-term usefulness, perhaps of five years or less. It is certain that presently "owned" college equipment, when replaced and sold at auction, recovers only a small portion of the original investment.

Also, ways and means of encouraging industry to provide equipment loans and gifts should be further studied by all colleges with extensive laboratories or shops. The ramifications of necessary paper work involved in the contractual arrangements for making loans or gifts should not be a tedious and burdensome experience to the donors. They should be enabled to get their tax "write-off" with the greatest of ease.

Advisory Committees

College technical advisory committees cooperate with and help colleges to avoid the lag in occupational information and also bring into face-to-face relation the users of the college product with the administrators and instructional staff.

One important facet of coordination for occupational programs is the utilization of advisory committees. These committees are designated for each specialized occupational curriculum. The committees are appointed by the president of the college from lists of names submitted by organized professional groups and those submitted by the responsible departmental coordinator. Representatives from local or state governmental agencies are included on the committee.

In the Los Angeles Junior College District, all of the colleges seek advice and counsel from management, labor, and governmental agencies in both the establishment and operation of specialized occupational programs. For instance, at the Los Angeles Trade-Technical College there are over 600 lay people who participate annually in some fifty regular committees or curriculum development committees. These Trade-Tech committees have contributed or loaned equipment, presently in use, amounting to over $900,000 in value; several committees, such as printing, sheet metal, and apparel, have existed for about forty years.

The advisory committees for specialized training programs meet at stated times. They may assist in developing new programs, reviewing existing curriculums, providing equipment or supplies, and evaluating the program and graduates. Before any program is started in a new occupational area an advisory committee is established to aid in gathering data, verifying the need, and exploring community support.

As a matter of long-term experience, advisory committees for specialized programs also play a vital role in college-community relations, bond elections, scholarships, and helping the college to create a good community image.

Advisory committees, when established for each curriculum area, provide authoritative evaluation and guidance in establishing and operating occupational and technical training programs. Community college advisory committees are of inestimable value. They contribute effectively to maintaining acceptable standards, to employment of the graduates, and to interpreting the colleges to the various publics. Extensive utilization of advisory committees should be encouraged and their relationships expanded at all colleges if more leadership in our communities is to become involved with our colleges.

College Research

With the extensive present and future need for trained personnel to support our way of life, the critical questions are "who shall we train," and "for what occupations?" In terms of this local and national concern, two-year college administrators must provide an institutional research program, seek our employment statistics, and enlarge student personnel services. We do too little "engineering" of programs and experimentation in leading young people into occupations in which they have interest, a realistic chance for success, and into fields necessary for development of our local communities, states, and nation.

Some of the "drive" for administrative interest in community employment research has come about by the national and local evidences, observable everywhere, that automation affects more and more job skills and shifts the whole occupational distribution. The coordination of college occupation-centered programs within a community or region is becoming exceedingly difficult. There is need for a continuous flow of reliable data, applied research on local and national occupational needs and shifts.

Administrators must encourage constant study of the educational implications for guidance and curriculum development by counselors and faculty. Research should be an essential element and service provided for junior college planning. Four goals for employment research conducted at the college for its own feedback would be (1) to analyze present and future occupational needs in the local area where a large proportion of college graduates seek employment; (2) to describe the essential competencies and standards required to meet these occupational needs; (3) to evaluate the extent to which the college meets these competencies and standards; and (4) to identify newer occupations and changes in occupations that suggest curriculum developments.

Follow-up of both dropouts and graduates placed in employment as a result of the college program should be a commonplace procedure on the part of the school authorities. This activity provides "feedback" necessary for evaluating the program, and gives many insights into teaching methods, the content of the curriculum, teacher-student relations, and is a check on counseling practices of the college. An annual follow-up of all graduates or a reasonable sampling of graduates and dropouts is useful to insure the effectiveness of the program.

There is definite need for college administrators to spend more budget on institutional research, follow-up studies, occupational surveys, counseling procedures, development of experimental techniques, and augmenting of occupational counseling staffs. We are wasting far too much of the human vocational talent enrolled at our junior colleges.

Interpretation of the College and Its Role

In the preceding sections of this paper, the internal structuring and functioning of the institution has been examined. Attention has been devoted to role allocation. We now come to a far more significant concern than any of those discussed to this point. Unless the college and its program is effectively articulated to its publics, all other efforts notwithstanding, the program cannot achieve success.

There is not universal acceptance for technical education as part of the junior college curriculum, particularly among the so-called "intelligencia." W. H. Ferry, Center for the Study of Democratic Institutions, sponsored by the Ford Foundation (Santa Barbara, California), recently stated that two-year colleges should persuade the legislature to relieve them of the burden of vocational training. "Meeting this statutory obligation is delaying the proper development of the most exciting of experiments, if it is still to be called an experiment, in higher education. It is a distracting, time-consuming, costly, and irrelevant obligation. . . . I see no reason why the two-year schools should be burdened with an assignment that in the nature of the case it must do inadequately. . . ." In his final remarks he stated ". . . you have far more important concerns than readying young men and women for the job market." [12]

Mr. Ferry's statements should sharply remind us that there are some leaders who do not welcome highly technical programs into the curriculum any more or less than trade programs. And, as any junior college which has introduced trade courses into the program has found out, it has had to "combat prejudice from within on the part of some of their own members and resistance from without on the part of the university, as well as tradition." [13]

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[12] Ferry, W. H. An address before California Junior College Association Spring Conference. Santa Barbara, California, May 1965.

What We Shall Interpret

As we make plans for college interpretation to our publics, we shall discover endless opportunities to explain the purposes of the college and, specifically, the story of occupational education. The basic facts pertaining to junior colleges—history, services, programs—are unknown to most publics. What shall we interpret?

First: We explain that the role of technical education, as a major curricular element of a junior college, is comparatively recent. We can briefly narrate to the publics that, historically, terminal and semiprofessional programs have been emerging since 1920, and at least two early-day leaders with great social vision urged acceptance of these programs. Lang insisted that the first concern of the junior college, "is with those who will go no further," [14] and President Snyder of Los Angeles Junior College established fourteen terminal, semiprofessional curriculums at this institution in 1929.[15] Just this much history is news to most groups. We could also cite a few highlights of the vital role and interesting history of the privately operated technical institutes in America.

Second: We inform local groups that the newly established junior colleges are opening their doors as multipurpose educational institutions; their curriculums typically include occupational programs ranging through business, trade-technical or technical institute-type offerings with significant differences in scope and objectives reflected in the instructional content. This is the national direction of the junior college movement.

Third: We make plain that with the diffusion of junior colleges there is now a dramatic increase in occupational education at the college level for persons seeking to prepare for careers in business, industrial, and technical occupations. This reflects an increased national recognition and acknowledgment of the importance and academic respectability of technology as a vital element in higher education.

Fourth: We assure groups and individual community leaders that the concept of "collegiate" as it applies to all types of junior college education, is clearly undergoing change when it is described in terms of developing the potentialities of each student, and defined as "the object of all college functions is the student, and the purpose of both curriculum and instruction is to induce change . . . more mature behavior, and intellectual development and personal competence."[16] This concept of "collegiate" is not universally interpreted nor adequately communicated by junior college leaders to the high school principals and counselors, parents, civic leaders, union-management representatives, persons in business and industry.

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[13] Lombardi, John. "Vocational Education in the Junior College." *School and Society*, 73; April 14, 1956. pp. 225-228.

[14] Lange, Alexas F. "The Junior College—What Manner of Child Shall This Be?" *School and Society*, 7; February 1918. pp. 211-216.

[15] Brick, *op. cit.*, p. 119.

Fifth: We help the publics understand the effects of technology on society and education.

Technological change creates a direct need for more education and skill on the part of all workers—whether in manufacturing, trades, service, business, or government. Technical education is imperative to educating our citizenry to become responsible, productive, and capable of adjusting to evolving technology.

For more than 70 per cent of the youths in the junior colleges, because of changes in society, vocational education is their chief means of preparation for employment. By nature of their ability and interests, they need both a sound basic education and a technical education to enter the world of work.

Sixth: We advise parents that their children must look to college technical education—not industry—for basic training for employment.

The in-plant training in some large corporations is a factor in providing specialized training. But the 1961 San Fernando Valley Employment Survey clearly indicates the junior colleges will continue as major avenues for technical training. This survey shows that of a total of 837 firms, including 114,000 employees, surveyed: 95 per cent of all plants had 500 employees or less; 75 per cent of all workers were employed in plants with 5,000 or less employees; only seventeen companies had "staffed" training departments.

Seventh: We point up the reassuring statistics and general fact that there is a genuine need for the skilled and technical workers in the future.

This has been well stated by President Lee A. DuBridge: "More skilled artisans, technicians and mechanics, more skilled operators of complex machines and equipment will be needed. Most of all, workers will be required with versatile skills who can swing from one type of skilled task to another as the nature of manufacturing processes changes, or as new types of industries arise and as old ones decline." [17]

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[16] Blocker, *op. cit.*, p. 202.

All of these facts regarding the necessity for technical education at the junior college level are factual and imposing. There are many more that could be identified. The various lay groups of our communities are deserving of better communication of these facts and interpretations.

Admittedly, local interpretation would be insufficient to the task, if there were no national, state, or regional "back-up." However, we are assured of continued effective interpretation of the role of technical education in the junior college curriculum at the national level. This comes from the activities of the American Association of Junior Colleges and its leadership, provided by Edmund J. Gleazer, Jr., who calls for "a new kind of college—standing between the high school and the university—offering broad programs of experience of value in and of themselves, neither post-high school as such nor pre-college as such."

Who Is Responsible for Interpretation?

The primary objective for staff members at all levels in the institution must be interpretation of the technical program. Of all those groups to whom it must be interpreted, none is more important than the board of trustees. The board is an immediate and key group of lay officials who must be thoroughly educated to the role of occupational education. The board not only controls the purse strings essential to the further development of occupational education but its members are invariably active in economic, civic, and political relationships; their understanding and belief in the programs, once attained, provide one of the most effective communication avenues to community-wide groups and leaders.

The president or the director or dean for technical education should be authorized to present technical education progress reports at regular board meetings: curriculum, building improvements, faculty or student achievements, campus developments. Such positive information reports will help the trustees learn to appreciate the worth, importance, dynamics, and the community acceptance of the role of occupational education.

The college administration should not attempt to solicit general community interest in the programs of occupational education without first exploring this close-by opportunity for interpreting the program to the trustees.

Too few faculty members participate in interpreting the college to the citizenry. Far more interest, activity, and concern on the part of the faculty is needed in cooperation with administrators to help inform community publics of the vital role of occupational education and the varied services of the institution.

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[17] DuBridge, Lee A. *Automation and Technological Change, Educational and Social Consequences.* Englewood Cliffs, New Jersey: Prentice Hall, Inc. 1962. p. 40.

The deans or directors for technical education have many opportunities to interpret the program for they cannot succeed as "four-wall administrators." They must participate widely in community affairs that touch on the socio-economic developments in the community that affect technical education; they must inform about and explain the technical program as they rub shoulders with leaders active in shaping and determining community developments.

The departmental chairmen or coordinators for technical curriculums can contribute to community understanding through personal qualities. They must radiate strong belief in the values of occupational education and inspire others to support these programs; they must be recognized as persons of integrity by the essential cooperating elements of the community, such as labor unions, trade or management associations, technical societies, employers, equipment dealers and manufacturers, and local governmental bureaus. Above all, they become person-to-person interpreters for occupational education. They must face the truth that occupational education, "although now an important part of public education, still needs those with a pioneering spirit who are willing to render service beyond the ordinary call of duty."

Administrative responsibility for interpreting the institution and its role in occupational education is only one side of the coin of communications. Beyond this the administration is responsible for organizing a well-rounded program of public relations involving united efforts of administration, faculty, and students. No one segment of the institution can accomplish this task—not excepting the president who personally devotes appreciable amounts of his time to this program. Ideally, everyone gets into the public relations act.

It is certain that the administration must gain college-wide cooperation as it fosters techniques, plans public relations methods and publicity devices to enable the college program to be conducted in as professional a manner as possible. When the college program of public relations becomes sizable, it then becomes necessary to provide some budget and manpower with professional competence. The budgets of the college or the associated student body must ultimately provide staff public relations specialists or journalists to be employed and give direction and the needed professionalism to the program.

Improving the Image through Public Relations

What must junior college administrators do to identify and improve the image of the occupational program? First of all, administrators must be convinced that the value, prestige, and recognition for these curriculums can be predictively bettered when there is an effective public relations program. Second, the administrator could start by an evaluation of the public relations effort of his own college to determine if there exists a well-planned and systematically organized public relations program that practices:

1. Professional articulation with "feeder" secondary schools
2. Participation in authoritative community occupational surveys
3. Utilization of advisory committees to the maximum extent
4. Thorough development of curriculums so that they are widely endorsed by industry
5. Reputable student guidance and admission standards consistent with the requirements of the program
6. Careful selection of guidance and instructional staff personnel that are respected
7. Job placement procedures for the best interest of student and community
8. Continuous self-evaluation of training efficiency and follow-up studies utilizing employer and student opinion questionnaires
9. Essential contacts with local chapters of recognized technical societies
10. Good relations with nonindustrial publics in our communities—service clubs, P.T.A.'s, governmental bureaus, state employment offices, among others
11. Assignment of administrators and supervisors of occupational programs to specific areas of responsibility in school-industry relations.

There are many public information practices and public relations devices or media that an enterprising administration and a creative faculty might consider as they jointly plan for exploiting the college's occupational programs. The principal ingredient to the successful program is administrative-faculty cooperation. A few of the acceptable devices are:

1. Initiate institutes or workshops for high school principals, counselors, and chairmen, so they become more alert to occupational reality and opportunities.
2. Print and distribute colorful training information brochures to all junior and senior high school counselors' offices in the area.

3. Arrange visitations of secondary school groups to industry or to fairs and to conventions.

4. Encourage business leaders and others to grant industrial scholarships for deserving technical students.

5. Have administrative representatives attend meetings of technical societies.

6. Hold an industrial fair for the high school counselors and students.

7. Promote a local ten-day period, career information center for parents and students, supported by business and industry.

8. Encourage the development of an industry-education council for establishing a clearinghouse for cooperative school support.

9. Develop achievement recognition programs for high school students.

Summary

It is well-recognized that this discussion has considered only a few of the many aspects of administration for occupational education. Throughout the paper an attempt has been made to imply that the technical educator is far more than an executive. He must be an inspired leader who is capable of "selling" the program to the community while "buying" cooperation within his own organization.

As administrators look ahead and gear up junior college organizational purposes, communications, and willingness of their faculty to serve the activities required, they might be impressed with the vision and wisdom of Edmund J. Gleazer, Jr., who, in making a speech on the topic, "The Golden Age of the Junior College," stated:

> *We talk many times about people not having a sense of motivation when they get into our great universities and colleges. They are not sure what they want to do. I don't blame them for this. The world and the economy is becoming more complex all the time. We should get those people into a kind of situation where they can give their attention not only to book-learning but where they can learn something about working with their hands. They are not making a life-long commitment. But they can make an entry into a respectable job. They begin to get a sense of motion and movement and with this sense of movement, hopefully, eventually, there comes not only motivation for learning but there comes a sense of direction. We are long past the time in this country when one prepared oneself for life; then it was all over. Now, one starts the educational process and gets into a job, but he must have educational resources available to him.*
>
> *In this country we've got to make it possible in every community to have a great educational resource-center so that people*

can be prepared for job entry. When they come up against a new opportunity, a new position offered, something else they want to do now, or a problem, then they have the opportunity easily to take advantage of whatever educational resource would be necessary to move along with this opportunity.

CURRICULUM AND INSTRUCTION IN OCCUPATIONAL EDUCATION

[illegible]

CURRICULUM AND INSTRUCTION IN OCCUPATIONAL EDUCATION

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If the junior college belongs to any era, it is to the span of the next three decades. The past has seen the infancy of the junior college; the present views its growth with surprise, and perhaps even a little alarm in some quarters; and the future's vision is as yet unknown as we look toward the twenty-first century. The next thirty years will be years of innovation on the one hand and maturation on the other; years of stress and strain, of potential and promise, of fruition and fulfillment.

What will these years be like? What new scientific discoveries, what new societal forces, what new economic drives, what new cultural patterns will emerge and shape this nation and its institutions? Some consideration of these questions is germane to the inquiry we are making at this conference into the directions which junior college occupational education should be taking. At the outset, let us look briefly at what the future may bring.

Thinking about the future has become such an integral part of science, engineering, economics, and government, that nearly $1 billion per year is currently being expended on what amounts to expert crystal ball gazing by professional "futurists" in the U.S. Well-known "think companies" like the Rand Corporation, Tempo (Technical Management Planning Organization), Resources for the Future, and Stanford Research Institute are utilizing the best scientific and philosophical minds of the nation in the fascinating art of forecasting the future. Here are some of the images they see in the crystal ball for the year 2000 A.D.

People: In spite of the pill, the U. S. population will have risen to 330 million, a net increase of about 75 per cent over today's 195 million. Nine out of ten Americans will live in cities or their suburbs. Unskilled jobs will have virtually disappeared and today's mechanization and automation will bear about the same resemblance to the automation and cybernation of 2000 A.D. as the Model-T Ford does to the 1966 Lincoln. People will still "work," but the work will be less manual, more cognitive; less muscular, and more cerebral. One's brow may sweat, but not to earn bread; one's muscles may ache, but from play not work. There may not be enough work to go around, and one of Tempo's futurists, John Fisher, has remarked that, "by 1984, man will spend the first third of his life . . . getting an education, only the second third working, and the final third enjoying the fruits of his labor.

. . . Moonlighting will become as socially unacceptable as bigamy."[1]

Food: Think men at Stanford Research Institute conceive of automated kitchens in which the housewife will program a week's menu on tape, stack all the food in selected storage spaces, set the programed clock for the hour meals are desired on given days, and then just round up the family at the proper time. Rand experts have been giving increased attention to food production problems versus overpopulation and it is their considered opinion that the gloomy predictions of impending world-wide famine are ill-founded. With intensive cultivation of ocean "farms"—herds of fish and millions of watery acres of protein-rich kelp and related water plants—the world's food supply could easily be tripled, in the face of a possible doubling of the population from the present 3 billion to 6 billion by the turn of the century. Not only will sea farming be exploited but far more intensive agricultural use of land areas can be made. If all the world's arable land were farmed as intensively as the Japanese and the Dutch farm their small plots, food production on land could be increased five-fold, according to Oxford agronomist Colin Clark.[2]

Transportation: You still won't be able to find a place to park in the year 2000 and freeway congestion may not be a thing of the past, but great advances will be made in rapid transit. Underground and overhead highways will multiply. Rail traffic will probably make a comeback in the next decade, with monorail equipment for short runs, and 150 mile-per-hour trains on conventional tracks for longer runs. New high speed (supersonic) passenger aircraft are already being tested, and huge planes carrying 1,000 or more passengers will span continents and oceans with fares much reduced under present-day rates. By the year 2000, ballistic rockets may whisk passengers from New York to Rio in 30 minutes. Improved versions of helicopters will shuttle passengers from rail stations to airports to space ports and from the inner city to suburban stations. Even the far-out thinkers discount the idea of scheduled trips for the lunar vacationer but there is a good measure of agreement that the moon will have a permanent spaceport, and that men will have landed on both Venus and Mars by the time the New Year's horns blare to herald the twenty-first century.

Health and longevity: Nonagenarians will be a common sight by the year 2000, and the Biblical life span of three-score and ten may have been advanced to four-score. Bacterial and virus diseases will have come under a considerable measure of control. Cardiovascular disease will be susceptible to vastly improved methods of treatment and many medical researchers feel that the enigma of cancer will have been solved before the middle '90's. Workers in the field of genetics are confident that DNA research will be sufficiently advanced that, in the words of Hudson Hoagland, executive director of the Worcester Foundation for Experimental Biology, "man will become the only animal that can direct his own evolution." [3]

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[1] *Time*, February 25, 1966, p. 29.

[2] *Op. cit.*, p. 30.

Man versus man: If these and other equally dramatic changes come to pass in the next three decades, where will man find his place with other men? Does each new man on earth diminish perceptibly the individuality of other men? As man is no longer driven to fight the wilderness or to eke out his living by toil, as disease and poverty come to be feared less, what will replace these drives and fears? If, indeed, man comes to control his own destiny and even his own evolution, what will be the moral character of his response? If, in truth, to paraphrase Shakespeare, the uses of adversity are sweet, what happens to man when most adversities are removed? Does man himself then become the only adversary?

To these questions the futurists have few answers. The world's religions, at diverse times and places, have seemed to offer some guidelines, but the codes have been almost as different as the religions themselves. You and I live in an age and work in a profession in which there is growing acceptance of the thesis that education may be the referee in the confrontation of man versus man. This hypothesis (and it is an hypothesis) is being tested today on every college campus in the nation, and it will be even more rigorously tested in the years ahead. You may well find the answer in the next decade. The junior college movement "is where the action is" and the next thirty years will determine whether the junior college *action* will have a significant impact on the great issues of our time.

If education, and specifically junior college education, is to reach this level of rising expectations, we, as junior college educators, have a sizable task ahead of us. Happily, not all of the job is the responsibility of the junior college, and even the segment which is the junior college task is further subdivided as we consider our specific tasks in technical education. Let me emphasize, however, that in terms of numbers of youth to be served, ours is an educational challenge of tremendous magnitude since the educational programs we are considering here are consistent with the abilities and interests of at least 50 per cent of high school graduates.

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[3] *Op. cit.*, p. 29.

The central focus of this paper is intended to be on curriculum and instruction in junior college occupational education. To sharpen the focus, let us begin with the following definitions:[4]

1. "Occupational education" refers to any and all education and training offered by junior colleges aimed at preparation for employment, as distinguished from curriculums in the liberal arts, the fine arts, or the humanities. "Occupational education" covers professional, semiprofessional, technical, and skilled-level curriculums for all fields (e.g., agriculture, business, industry, health, home economics, public service) of employment.

2. "Semiprofessional education" is represented by formal curriculums leading to the associate degree and designed to prepare the student for employment in career fields recognized as nearly professional in status. Some examples: engineering technician, medical technician, architectural draftsman, business data programer, and associate degree registered nurse. Semiprofessional workers usually work in close cooperation with, and perhaps under the direct supervision of, a professional person.

3. "Technical education" is a term which is just beginning to acquire meaning in this country. There is no unanimously accepted definition of the term. For the purposes of this paper, however, technical education—(a) is organized into two-year curriculums at the colloge level; (b) emphasizes work in the field of science and mathematics, and frequently, but not always, is related to industry and engineering; (c) gives much attention to technical knowledge and general education but also stresses practice and skill in the use of tools and instruments; (d) leads to competence in one of the technical occupations, and usually to the granting of an associate degree; and (e) includes a core of general education courses (English, humanistic-social studies, liberal arts) up to perhaps one-fourth of the total credit hours.

In the light of these definitions, the discussion to follow will range across almost the entire spectrum of "occupational education"—the professional occupations only, being excluded.

Curriculum Development

Prior to initiating occupational education curriculums or courses, two essential steps are necessary: (a) determining need and (b) determining capability.

Steps in determining need: Local needs of employers can best be assessed by making a comprehensive occupational survey, followed up by "spot" surveys as needed to explore specific areas in depth. Techniques for such surveys are already well-known, and no purpose would be served by detailing them here. However, a few guidelines are worthy of emphasis.

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[4] Harris, Norman C. *Technical Education in the Junior College: New Programs for New Jobs*. Washington, D.C.: The American Association of Junior Colleges, 1964. p. 21.

1. Such surveys should have a carefully developed research design and should be staffed by professionals who understand the methods to be pursued and the pitfalls to be avoided.

2. Advisory committees of informed lay citizens should be a part of every such survey. Such committees should be comprised of persons at several levels of responsibility—not just vice-presidents, owners, and managers.

3. The requirements for employees in entry jobs should be determined and the specific knowledge and skills required should be ascertained.

4. A definite attempt should be made to find out the level of general education, or the common learnings, required for success and promotion on the job.

5. Not only must potential jobs be identified but the numbers of qualified students interested in specific educational programs must be accurately estimated.

Regional needs can usually be determined from studies already made by other agencies such as chambers of commerce, planning commissions, interstate compacts, state employment agencies, and employers' associations, chain banks, and similar groups.

National needs are readily identifiable from the publications and reports of the U.S. Department of Labor, the National Science Foundation, the National Institutes of Health, the U.S. Chamber of Commerce, associations of manufacturers, the President's manpower reports, the U.S. Office of Education, and similar agencies.

Determining capability: If there are unfilled manpower needs and a sufficient level of student demand, the test of capability should be applied. Capability has two essential features, staff and facilities, and both of these can perhaps be melded into one: fiscal capability.

Occupational education programs of high quality require a sound financial base. Per-student annual operating costs run from $800 to $1,600 annually, as compared to a $500 to $750 unit cost for academic or transfer programs. Capital investment requirements for some occupational programs are enough to shake the resolve of the most dedicated of boards of trustees. A few examples will suffice for illustration, with the cost of a "standard" classroom for academic courses listed first for comparison.

Standard classroom with table arm chairs	$ 25,000
Mechanical technology lab, completely equipped	80,000 to 150,000

Dental assistant lab, with ten stations	75,000
Electronics lab for advanced work; twenty stations	125,000
Suite of five rooms and labs, completely equipped for business education	200,000
Data programing and computer lab (equipment purchase basis)	250,000

Many board members and not a few faculty will demur when faced with costs like these. When funds are short of the amount necessary to meet a comprehensive educational program there will always be those who will say, "Why spend these huge sums of money for occupation-bound students, when we really don't have enough money for the 'good' students?" The liberal arts mystique almost takes the form of an arm band for many persons on and off junior college faculties. They wear it with such smug pride that it appears they must have forgotten two very essential factors:

1. The single-purpose, academic-liberal arts-oriented junior college serves the needs of only about one-third of the high school graduates of the community. And what does it do for them? For one thing, it prepares them to leave town. It acts as a one-way valve through which flows a stream of bright and able youth, most of whom never return to participate in bettering the community which gave them their start. Such communities are engaged in the peculiar enterprise of investing in an export product for which they receive little return. In contrast, a high percentage of occupational program graduates settle down in their local community and participate effectively in its growth and development.

2. Although occupational education programs do cost more than academic programs, it should be noted that after two years the graduates of these programs move into the economic life of the community and start producing wealth; while the "transfer" graduate has two, three, or even more years of further education ahead of him, most of it also at public expense, before he becomes productive in some other place.

Capability, then, implies availability of funds and facilities; and availability of qualified faculty. There is never an ample supply of either commodity and, consequently, priorities must be established and goals set which are consistent with the ability to realize them in given time periods. Junior colleges would do well to heed the following maxim: Welcome diversity within the context of quality but avoid proliferation at the expense of quality.

Cooperative faculty planning: A college accomplishes its educational goals through its faculty. Planning and teaching are not separate functions—they go hand-in-hand. The role of administration is not solely to plan but to encourage and assist faculty in planning. Within this philosophical framework, many junior colleges have continuing curriculum committees whose membership includes the deans, division chairmen, the guidance director, and a half-dozen or more members-at-large elected by the faculty. Such a committee does not merely approve courses; it initiates, plans, and approves curriculums. Within broad policies established by the board of trustees, it helps plan and establish priorities for curriculum development.

Integration of curriculums: Two overriding principles should govern curriculum development for junior college occupational education:

1. Job training, *per se,* is not the purpose of associate degree programs. The more important of the two words "occupational education" is "education."

2. A junior college campus ought not to have two separate colleges under the same roof with two separate student bodies and two separate faculties. A comprehensive junior college takes students where they are and prepares them for their next goal in life—be it matriculation at the state university or caring for the sick in the general hospital. All students on the campus are college students, and curriculum planning should reflect this philosophy. All occupational education curriculums should present a carefully balanced "mix" of general and liberal arts education, theory and technical support courses, and specialized skill courses. The place of each of these in a total curriculum is a subject to which we now turn.

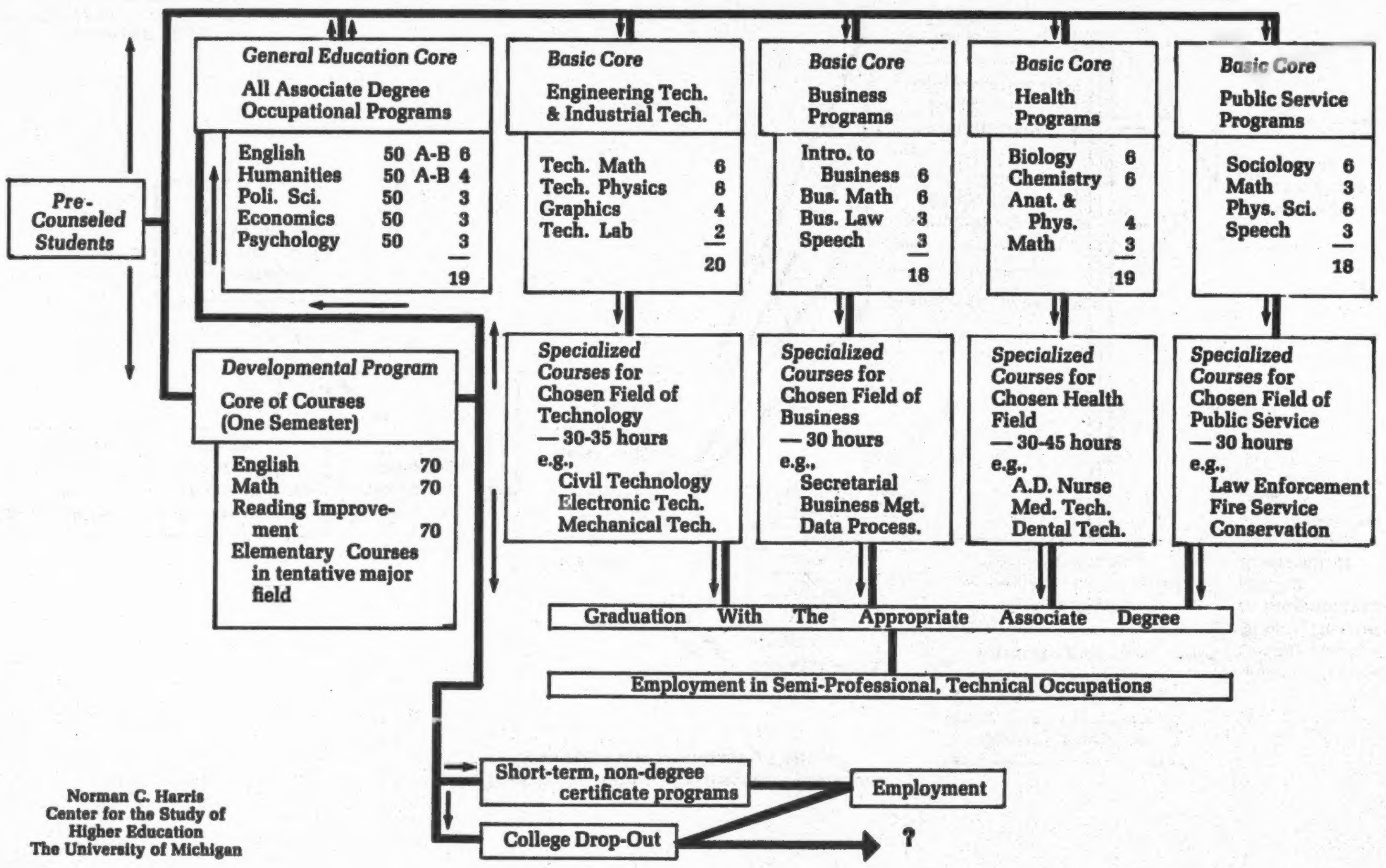
General Education and the Core Concept

The controversy between the academicians and the vocationalists has been long, acrimonious, and nearly always fruitless. These hoary protagonists remind me of the elephant and the whale who fell into an argument over which one possessed the greater strength. They never could settle it since the whale wouldn't come out on land and the elephant wouldn't go in the water. Is there a parallel here in the case of the history teacher who never darkens the door of the electronics lab, and the shop teacher who wouldn't be caught dead at a concert?

Time does not permit me to enter the lists, but I would like to suggest two premises on which we might agree:

1. The "liberal arts" as envisioned by Cicero—the studies for free and leisured man—may have been proper educational fare when only the free man had the leisure to think, plan, lead, and govern; and when the other 95 per cent worked almost, if not quite, as slaves. Today, in America, in a society where all

Suggested Core Curriculum Plan
Community College Associate Degree
Occupational Education Program


Pre-Counseled Students
General Education Core
All Associate Degree Occupational Programs
English 50 A-B 6
Humanities 50 A-B 4
Poli. Sci. 50 3
Economics 50 3
Psychology 50 3
19
Basic Core
Engineering Tech. & Industrial Tech.
Tech. Math 6
Tech. Physics 8
Graphics 4
Tech. Lab 2
20
Basic Core
Business Programs
Intro. to Business 6
Bus. Math 6
Bus. Law 3
Speech 3
18
Basic Core
Health Programs
Biology 6
Chemistry 6
Anat. & Phys. 4
Math 3
19
Basic Core
Public Service Programs
Sociology 6
Math 3
Phys. Sci. 6
Speech 3
18
Developmental Program
Core of Courses (One Semester)
English 70
Math 70
Reading Improvement 70
Elementary Courses in tentative major field
Specialized Courses for Chosen Field of Technology — 30-35 hours e.g., Civil Technology Electronic Tech. Mechanical Tech.
Specialized Courses for Chosen Field of Business — 30 hours e.g., Secretarial Business Mgt. Data Process.
Specialized Courses for Chosen Health Field — 30-45 hours e.g., A.D. Nurse Med. Tech. Dental Tech.
Specialized Courses for Chosen Field of Public Service — 30 hours e.g., Law Enforcement Fire Service Conservation
Graduation With The Appropriate Associate Degree
Employment in Semi-Professional, Technical Occupations
Short-term, non-degree certificate programs
Employment
College Drop-Out
?

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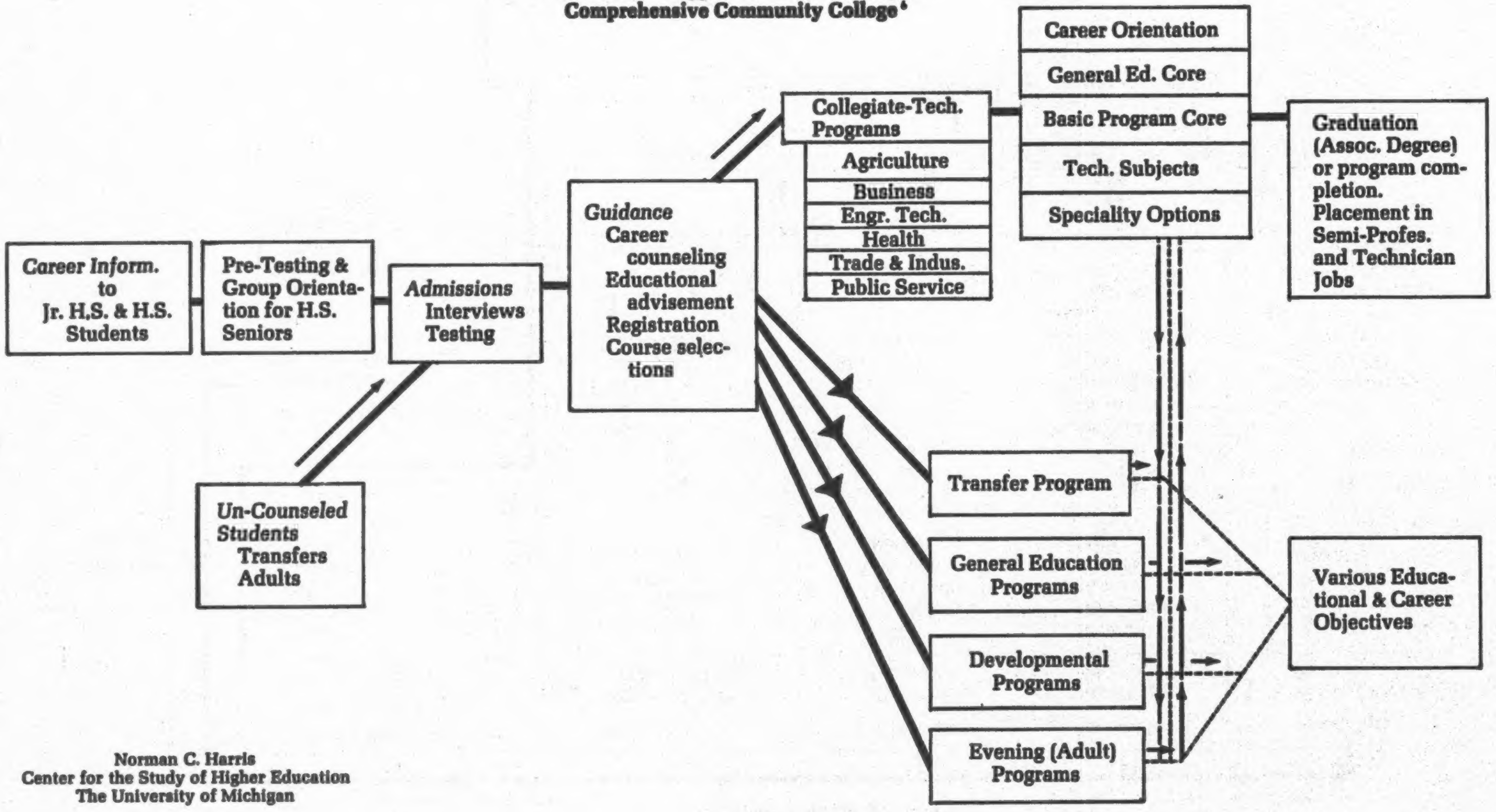
Flow Chart—Suggested Guidance Program
Comprehensive Community College[6]


Career Inform. to Jr. H.S. & H.S. Students
Pre-Testing & Group Orientation for H.S. Seniors
Admissions Interviews Testing
Un-Counseled Students Transfers Adults
Guidance Career counseling Educational advisement Registration Course selections
Collegiate-Tech. Programs
Agriculture
Business
Engr. Tech.
Health
Trade & Indus.
Public Service
Career Orientation
General Ed. Core
Basic Program Core
Tech. Subjects
Speciality Options
Graduation (Assoc. Degree) or program completion. Placement in Semi-Profes. and Technician Jobs
Transfer Program
General Education Programs
Developmental Programs
Evening (Adult) Programs
Various Educational & Career Objectives

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men are free and where almost all men work; where those with the greatest amount of education work the most, and where the best guarantee of leisure is a lack of education; where pastoral pursuits and a rigid class society have given way to a highly scientific, technological, and industrialized society with great horizontal and vertical mobility among classes—the liberal arts curriculum as a standard for all higher education leaves much to be desired.

2. By the opposite token, though we live in a technological society, man himself is not a machine. If higher education holds out hope for the personality and individuality of man, and I think it does, then all educational programs must incorporate some degree of confrontation between students and the ideas men have produced and nurtured through the centuries. Contemplation, I am convinced, is good for everybody—it should not be an exercise reserved for the elite few. I suppose it would be difficult to prove that a given amount of general education or liberal arts content in a two-year occupational education curriculum can produce any stipulated amount of insight into the problems of man and society, but if we have any faith in democracy as Adlai Stevenson defines it ". . . an irrevocable and final dedication to the dignity of man,"[5] an experience in general education would seem to be worth the gamble for all junior college students.

Let me, therefore, present some suggestions for the incorporation of a core of general or liberal arts education into curriculums of occupational education at the associate degree level. The following chart, although it suffers from the necessity to simplify a complex problem, will help to illustrate the concept being proposed.

Student Selection

A careful review of the proposed flow of students as indicated in the chart reveals two basic directions in which pre-counseled students may proceed. Fully qualified students may enter immediately into general education and basic core subjects. Those students with deficiencies move into a one-semester developmental program. It is, thus, obvious that the "open door" college has many "closed door" curriculums. Granted that testing, interviewing, and evaluation of past academic performance do not add up to an exact science of prediction, it is, nevertheless, indefensible to allow students to enroll in any curriculum or course which suits their fancy. Every college will have to set the end-product standards it will require for completion of its courses and curriculums.

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[5] *Time*, February 1, 1963. Address to the Center for the Study of Democratic Institutions, New York.

To a certain extent, these end-product standards will determine entry standards into courses and curriculums, since there are obviously limits to what can be accomplished in a two-year program.

Despite the gradual improvement of standardized tests, the best single predictor of college performance is still high school grades. Most certainly, however, high school standing should not be used as a sole criterion. Several measures for prediction are always better than one, and a philosophy of flexibility should govern the student selection process. With respect to standardized tests, several have been used long enough and widely enough to be of considerable value in prediction, *when used in conjunction with other measures.*

The School and College Aptitude Test (SCAT) gives a "verbal" and a "quantitative" score, and has national norms for college freshmen. The CEEBSAT test, now given by nearly all high schools in the nation, also can be related to national norms. For technology programs the *Iowa Tests of Educational Development,* particularly ITED-2, *General Background in the Natural Sciences;* and ITED-4, *Ability to Do Quantitative Thinking,* are reasonably good predictors of junior college performance. High school rank in class, combined with ITED-4 and the SCAT battery, have been used with considerable success for several years by the Los Angeles Junior College District in the selection of students for programs in engineering technology.[6]

Substitution of a suitable standardized test in the life sciences for the ITED-4 in the foregoing arrangement would result in a satisfactory basis for selecting students for the health technologies. A similar variation obtained by using a secretarial aptitude test is used by some junior colleges for placing students in various business education curriculums and courses.

There is a wide range, or difference in difficulty level, however, in junior college occupational programs. This range is so great that a junior college which claims to be "open door" will have to provide two or more levels of occupational education programs—some curriculums at the semiprofessional or technical level, some at the skilled level, and perhaps some at the semiskilled level. Let me illustrate with a reference to programs for technicians related to engineering and industry:

Many junior colleges commit a grave error as they plan technician curriculums. In their determination to be "academically respectable" (whatever that means) they plan programs only for engineering technicians, pitching them at a level of rigor which differs hardly at all from that of lower division engineering programs. Recently I was asked in as a consultant to help a junior college in the Middle West evaluate its technician program, which, in the words of the dean, "was dying on the vine." The program had been in operation for about seven years. Investigation revealed that the college possessed excellent facilities for technical education and a faculty of unusually high quality. The community was one in which the industrial and business complex needed many newly graduated technicians each year. In the third year technician enrollments in the regular day program had reached a peak of about ninety freshmen and thirty-five sophomores and had then declined steadily to a point where this past September only thirty-eight freshmen and eighteen sophomores were enrolled. There were a number of issues related to the program's decline and impending demise but the central core of the problem was the unreasonable rigor of the curriculum. The courses were actually pitched at an engineering level, not a technician level. Many courses required in the technician curriculum were the same courses as those taught for the transfer engineering students. Analytic geometry and calculus, general chemistry, and engineering physics were required in the first semester of the freshman year. Now there may be some localities where students who have the capacity to become graduate engineers will, for some reason or other, decide on a two-year degree and technician status, but that particular community is not one of them. I suspect that there are very few such communities. Technician jobs are, after all, middle-level jobs, and students of middle-level abilities should be able to succeed in technical courses. When they cannot, something is wrong and the error isn't with the students.

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[6] Medsker, Leland L. *The Junior College: Progress and Prospect.* New York: McGraw-Hill Book Company, 1960. p. 97.

To be sure, engineering technician curriculums must include, at the sophomore level, applied calculus and certain other intermediate mathematics courses; and courses in physics, chemistry, mechanics, and electronics whose rigor approaches that of engineering courses; but students of middle-level abilities have to be brought up to these courses gradually after a freshman year devoted to solid groundwork in technical-level mathematics and technical physics. The scope and sequence of these basic courses must be carefully planned, and preferably they should be taught by instructors with an engineering or applications approach rather than by instructors possessed by the "chemistry is chemistry" syndrome.

And most important, community colleges should provide two different levels of curriculums in the technologies, ranging from the engineering technologies across the spectrum to the industrial or highly skilled technologies, in order to accommodate the needs of business and industry and also the abilities and interests of students of middle-level academic potential. Exactly the same line of reasoning applies to business fields, the health technologies, and to curriculums in public service.

Occupational programs and secondary school education: Many of the most troublesome problems for junior colleges begin in the high school. Secondary school curriculum planners seem unaware of the middle manpower spectrum and of the growing role of two-year colleges which offer programs of education and training for these jobs. Typically, high schools offer three tracks—college preparatory, vocational, and general. The sad truth is that the "general" track prepares for nothing but graduation. The vocational track claims only 10 to 20 per cent of the student body and does not really prepare them very well for today's jobs. And the college preparatory track ordinarily succeeds in preparing less than half of its graduates for entry into baccalaureate-degree-granting institutions. A critical need in today's high schools is the introduction of a fourth track—a junior college prep track, if you will—to prepare perhaps one-half of all high school students for entry into occupational education programs in junior colleges, technical institutes, business colleges, and similar institutions.

A small start has been made on pre-technical programs in selected California high schools, in cooperation with a technical institute in San Francisco,[7] and there is a beginning ripple of interest in some Michigan high schools, as an outgrowth of a research report recently completed at the University of Michigan.[8] The next five years should see a rapid growth of this kind of curriculum development in secondary schools, not only for technician programs, but for business, health, and other fields as well. However, it will take the leadership and persistence of technical educators and junior college administrators to move these projects.

Balance in the Occupational Education Program

For some years now, since Sputnik I coursed across the heavens and caught us with our technology down, the technician has been the man of the hour. (Here I am using the word "technician" in the restricted sense—engineering- and industry-related.) It is no accident that junior colleges, during the decade just past, have concentrated on the development of educational programs to prepare technicians for industry and engineering research. The demand has been greatest in this field, salaries for the graduates have been good, and the status image of the "sport collar" worker engaged in space research, or seated at a computer console, has been attractive. Studies and reports by such prestigious agencies as the National Science Foundation, the Engineering Manpower Council, and the Executive Office of the President have at one and the same time revealed need and promoted new training programs. The National Defense Education Act of 1958 and the Vocational Education Act of 1963 both stipulated a national interest in technician training. But, after ten years of continually expanding effort on the part of the community colleges, technical institutes, and university extension centers, the technician gap is still estimated to be nearly 35,000 per year just for technicians in industry and engineering-related fields.[9] Consequently, there is still a pressing need for the establishment of new engineering and industrial technology programs and for recruiting more qualified persons to enroll in existing programs.

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[7] Knoell, Dorothy M., and Medsker, Leland L. *Factors Affecting Performances of Transfer Students from Two- to Four-Year Colleges.* Cooperative Research Project No. 1133. Berkeley, California: University of California, Center for the Study of Higher Education, 1964.

[8] Knoell, *op. cit.*

However, other actors in the junior college educational drama are beginning to claim a share of the center stage. Business education actually enrolls more nontransfer students in junior colleges than any other field. In spite of growing automation of the business office, never has the demand been greater than it is today for well-qualified secretaries. Although bookkeeping as we used to know it is a declining field of employment, accounting, particularly machine accounting, and business data programing are rapidly growing fields. Business management, as a field for two-year college graduates is also an expanding area of employment. Included under this generic heading are jobs in sales, purchasing, advertising, credit and collections, store management, and inventory control.

The hottest item in the junior college educational inventory today is the health technology field. Plagued by a shortage of doctors and nurses for over a decade, the health manpower situation is now being exacerbated by the advent of Medicare and other Great Society programs. Needed by the thousands are more registered and practical nurses; medical lab technicians; X-ray and electrocardiogram technicians; and technicians to support medical research. Although smaller numbers are involved, the need is nonetheless critical for dental technicians, histologic technicians, inhalation therapists, and psychiatric technicians.

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[9] Los Angeles City School District. *Some Characteristics of Engineering-Technical Students in the Los Angeles City Junior College District.* District Research Report No. 248. Los Angeles, November 1962.

These are the job titles by which we know these workers today, and training programs for these jobs are fairly well-stipulated by state laws and by national and regional associations. However, in curriculum planning junior colleges must be alert to changes which may be imminent in many of the paramedical fields. Automation will have its impact here, especially if severe manpower shortages continue. The new "intensive medical care" concept in hospital wards, and the new instrumented and automated pathology laboratories such as the experimental one at Johns Hopkins, may be forecasting the winds of change in the paramedical field. The A.M.A.-approved program for certified laboratory assistants is another innovation which suggests that we have to reassess curriculum planning each year.

Another occupational field deserves careful study and prompt action by junior colleges. Jobs in the public service are being upgraded to the point where two years of college may soon be the desired educational level. Law enforcement, fire protection service, conservation, social work, and even teaching, are all fields where associate degree graduates may soon find many semiprofessional and technical-level jobs awaiting them.

Finally, the whole realm of the service industries (e.g., restaurant and hotel management,[10] tourism, auto and appliance repair) is just beginning to realize the economic advantages of junior college-trained employees, and junior colleges should be planning now to initiate and expand programs to train for jobs in these and other service industries. More glamorous jobs get all the publicity but it is doubtful that there is any group of employers in greater need of well-trained employees today than the auto service garage owners of America. Junior colleges can, and many do, offer quality automotive service occupational programs.

The challenge to the junior college then, is one of diversity and balance. All colleges cannot serve all fields, to be sure, but sensitivity to real needs and imaginative planning, perhaps on a regional basis, will enable the junior colleges of America to serve the manpower needs of the nation in a way they have never been served before.

Teaching and Learning—Faculty Recruitment

To the extent that we can stimulate learning by good teaching, we should be congratulated; but to the extent that we can get learning to take place without teaching, we should be truly commended. Reference will be made later to the critical shortage of qualified teachers for junior college occupational programs. There just are not, and will not be, in the foreseeable future, enough good teachers to staff our programs if we persist in the traditional methods of teaching and learning.

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[10] See *The Richmond Plan*, a report of a cooperative study. San Francisco: Cogswell Polytechnical College, 1962.

Where is the magic in a class size of thirty? Is wisdom diminished as the number of listeners increases? Is the impact of an idea lessened in inverse ratio to the size of the class? Common sense answers "no" to these questions and so do the results of much recent research. It would appear that there are only some kinds of class situations in which small class size is imperative. These might be:

1. Classes or laboratories where the instructor must engage in some tutorial activities, helping individual students
2. Classes where the development of speaking ability or the participation level of the individual student is of primary consideration
3. Classes where the instructor must demonstrate a skill, and then supervise while students practice the skill.

Other kinds of classes, those in which facts, ideas, and theories are to be presented, can be taught in much larger groups if provision is made for follow-up seminars, and outside-of-class learning by means of multimedia devices or educational technology. Probably the most inefficient class size in colleges today is the range from thirty to sixty, and it is this range which is most commonly encountered. Such classes are too large for seminar work, and much too small to evoke the kind of high quality presentation we like to think all junior college instructors will give. In my opinion, the practice of meeting five sections of thirty students each, and giving the same lecture five times in the same week is a gold-plated guarantee of intellectual stagnation on the part of the professor.

Every community college should have a "learning forum," an especially fitted-out lecture hall with every known device of educational technology, staffed by audiovisual technicians, TV technicians, graphic arts technicians, and other teacher aides, in which 200 to 400 students could come together for the basic lecture which the teacher gives only once after thorough planning and rehearsal with his staff of aides. Depending on the subject matter of the course, provision should be made for small-group seminars, quiz sections, skull sessions and the like, led by professional staff or perhaps by technical aides; and for an expanded program of learning outside the classroom with the use of films, autotutors, models, tapes, and, of course, books and the more conventional "library" materials. These materials should be readily available at several levels of rigor, and they must be easily accessible, perhaps in a facility where the atmosphere is not so icy as it so often seems to be in college libraries.

If we are right in assuming that good teachers will be in short supply in the years ahead, should we not be scratching our heads to find ways to allow the good teachers to come in contact with more students? I think students can learn more in large groups from a good teacher than they can in a tutorial from a poor teacher. We have been too concerned with getting enough teachers to fill our standard classrooms, and not concerned enough with modifying our spaces and providing modern equipment so that our great teachers can reach more students. Wisdom is a scarce commodity. I do not think we can afford the luxury of entrapping it in a 26 x 30-foot room with only thirty students.

There are implications here for campus planning, three of which are suggested:

1. Provide very few standard classrooms. Instead, plan for one or more learning forums, several specialized lecture halls, many small seminar rooms, and of course the necessary laboratories and shops.
2. Realize that a library should be far more than a book collection and plan it accordingly. Its concept should be one of availability of instructional materials, not one of custody and protection.
3. Provide not just one, but several "learning laboratories," strategically located in the several major buildings on the campus, where students can come and go at will, using teaching machines, tape recorders, films, closed circuit television, recordings, and other aids to learning. These centers should be staffed at all times by competent technicians.

Recruitment and training of faculty: A technician gap of 35,000 graduates per year was mentioned in a preceding section as applicable to engineering- and industry-related jobs alone. Shortages in other fields are not as well-documented but estimates I have pulled together from a variety of sources indicate a paramedical occupations gap of at least 20,000 two-year graduates per year; a business occupations gap of 25,000; a public service occupations gap of 15,000; and a service industries gap of 25,000. These all total up to 120,000 new workers per year for the foreseeable future.

Let us assume that junior colleges and technical institutes would set themselves the goal of providing just half of these graduates, or 60,000 per year more than we are now producing. Since attrition rates dictate nearly twice as many enrolled freshmen as the number who will complete associate degree programs two years later, there is an indicated need for 120,000 new enrollees per year (over and above present enrollments) for the foreseeable future. Translated into teaching faculty at a student-to-teacher ratio of 20:1, the immediate need for new faculty can be set at 6,000 qualified instructors—some in mathematics, science, and supporting technical courses; some for general education courses; and perhaps 4,000 for specialized occupational courses. If, by some Herculean effort, the initial 6,000 could be recruited in the next two years, the ensuing annual demand, to provide for further growth in enrollments for retirements, deaths, and resignations for other causes, might settle down to a rate of about 1,000 new teachers per year for the period 1968-1975. It is emphasized that these projections are for staffing technical-vocational programs only.

Where will these teachers be trained? This is the single most critical challenge facing the community college movement as a whole. The American Association of Junior Colleges, with substantial foundation support, is turning its attention to the problem. A number of universities and state colleges are belatedly recognizing a responsibility for junior college teacher training. But the inertia of tradition is difficult to overcome. Somehow, most teacher training institutions subscribe to the notion that training elementary and secondary teachers is their regular business and has first call on the general budget; and that training community college teachers is an extra job, which can only be attempted if extra money is available from grants or supplemental appropriations. Our task, and it will not be easy, is to reorient schools of education and teacher education institutions so that the preparation of junior college teachers will become a recognized responsibility with a fair share of staff time and general budget allocation. Joint ventures between schools of education on the one hand, and schools and departments of engineering, business administration, nursing, medicine, and dentistry on the other, will have to be initiated. And the colleges of letters and science with their departments of physics, chemistry, mathematics, and the liberal arts fields will also have to be cultivated, so that a flow of qualified graduate students from these fields can be encouraged to enter community college teaching.

The kind of program now being started at the Midwest Technical Education Center, with its cooperating universities, may set the pattern for a nationwide solution to the problem of junior college faculty shortages.

One further factor must be mentioned—the necessity to establish conditions of faculty service in a manner which will not discriminate against instructors in occupational fields. The typical degree-and-college-credit-based salary schedules will have to be modified to recognize other qualifications which contribute to professional teaching. Faculty rank plans and paths to promotion will also have to be adjusted so that teachers whose performance merits it can move up through the professional and salary ranks without regard to degrees and/or college credits. And, provision will have to be made to "hire in" at rank and salary levels commensurate with the attainment and reputation for excellence of those persons entering teaching from other fields of endeavor. These changes will not be easily brought about, largely because of resistance from the academic "types" on college faculties; but until we do make significant progress on these matters we shall remain in the ridiculous position of trying to recruit experienced engineers for the engineering technology faculty at salaries which are the going rate for new graduates of two-year technician programs.

Continuing Education for the Associate-Degree Graduate

With increasing frequency these days, the community college graduate, after working for a time, thinks of continuing his education. His employer may suggest it, better job opportunities which require further college work may beckon, or, having proved his scholastic ability by attaining the associate degree, the individual may now desire further education with the baccalaureate degree as the eventual goal in mind. At present, upward mobility from a two-year occupational education program into a four-year baccalaureate degree program is not easy—in most states, at any rate. Some states, however, are removing the barriers between the associate degree and the path on up to the baccalaureate degree. Oklahoma State University, for example, has worked out a plan whereby graduates of two-year technician programs can move ahead toward a baccalaureate degree without excess loss of lower division credit. The University of Florida has recently announced a similar program leading to a baccalaureate degree for teachers of technology subjects. Ferris State College in Michigan welcomes junior college graduates of occupational programs and works out a degree program for them which minimizes loss of credit. Several states have excellent plans for graduates of business education programs who decide to enter a teachers' college in a business education teacher program. Some universities will evaluate junior college courses as to content and rigor and make a judgment on an individual basis as to the amount of lower division credit which may be allowed for these so-called "nontransfer" courses. Engineering technology graduates from New York's community colleges find it relatively easy to move ahead toward a degree in some of that state's four-year institutions. Records kept by New York's community colleges and ag-tech institutes over the past ten years indicate that about one out of three graduates of two-year engineering technology programs eventually moves on to a baccalaureate degree.

Many graduates of associate degree nursing programs later wish the paths were open for further work and an eventual baccalaureate degree. At present, they are not open and in general the same thing could be said of most of the paramedical fields.

Mention was made of continuing education opportunities for two-year business graduates who intend to enter a business teacher education program. However, the same kind of opportunity is not open to those who would like to continue toward a degree in business administration.

Other fields in which little or no credit toward a baccalaureate degree program is ordinarily given for associate degree occupational education courses are: architecture, criminology, forestry, hotel and restaurant management, social work, journalism, and of course, the sciences and mathematics.

No pleas are being made here for any kind of blanket acceptance of credits from junior college occupational education courses. And, most certainly, I do not recommend sacrificing the kinds of experiences which really prepare for middle manpower jobs just for the sake of some (possible) college credits toward a baccalaureate degree. All we can hope for here, (and we can work for it too) is an increased flexibility on the part of universities and four-year colleges along with a willingness to evaluate students and courses on their individual merits rather than on a transfer versus terminal basis. I doubt that a national attack on this problem is feasible at the present time. It seems to me to be a matter which can best be solved at the state or regional level, by liaison committees working for better understanding between junior colleges and four-year colleges. Perhaps the AAJC and/or the Midwest Technical Education Center can point the way with some pilot programs in junior college—university articulation. The results of such efforts could then be disseminated nationwide with ultimate benefit to junior college programs and junior college students everywhere.

Conclusion

Community college education for the seventies and beyond must respond to change. It must be recast in a form and substance which includes occupational education as a major function. All of the following factors must be dealt with as we plan anew for the permanency of change:

1. The increasing complexity of everyday life in all of its facets—cultural, intellectual, and occupational
2. The explosion of scientific and technical knowledge, the scope of which nearly doubles every decade
3. The hard fact that in our society education stands between man and his job
4. The impact of automation and the flow process industries on men and jobs
5. The virtual disappearance of unskilled (common labor) jobs, contrasted with a critical manpower shortage in semiprofessional and technical (middle manpower) fields, and the continually changing requirements in the "manpower mix" of a nation facing up to the future
6. The realization that a "disaster gap" is already opening up between those Americans with advanced education and those with little education [11]
7. Recognition of the fact that much, if not nearly all, of the occupational education of the future will have to be conducted at post-high school levels
8. The urgent need in our society for millions of well-informed and well-trained citizens—people who can both think and do—and the gradual disappearance of the former bi-polar society in which the well-educated few did all the thinking and the poorly educated masses did all the work.

The needs of the nation dictate the necessity for an explosion in education and training for youth and adults, for all existing occupational classifications, and for many new ones which we can see only dimly as we try to focus on the future.

The needs of youth and adults are summarized in the new relationship between man, education, and work. In a former day, 5 per cent of Americans dealt with ideas, and the other 95 per cent worked! Today, more than half the labor force works at jobs whose intellectual content demands education and training which can best be offered in colleges. Lack of education is today's guarantee of leisure.

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[11] Harris, Norman C., and Yencso, William R. *Technical Education in Michigan Community Colleges*. Ann Arbor, Michigan: The University of Michigan School of Education, 1965.

Education is never terminal. Just as change is a permanent fixture of our society, so is continuing education the key to continued economic productivity in the decades ahead.

The educational program of the future must seek new directions. Emphasis must be put on education and training for middle-level youth and for the slow learner, as well as on education for academically superior youth. We cannot continue to put three-fourths of our junior college educational effort on the needs of one-fourth of the students. Middle-level youth in junior colleges outnumber "superior" youth by three-to-one. It is high time that we stopped neglecting their educational needs—high time that we stopped regarding occupational education as being somehow not respectable. The needs of average students are also the nation's needs in this era of change. The junior college can serve all of its students and the nation in the decades ahead. It is our challenge to see that it serves both well.

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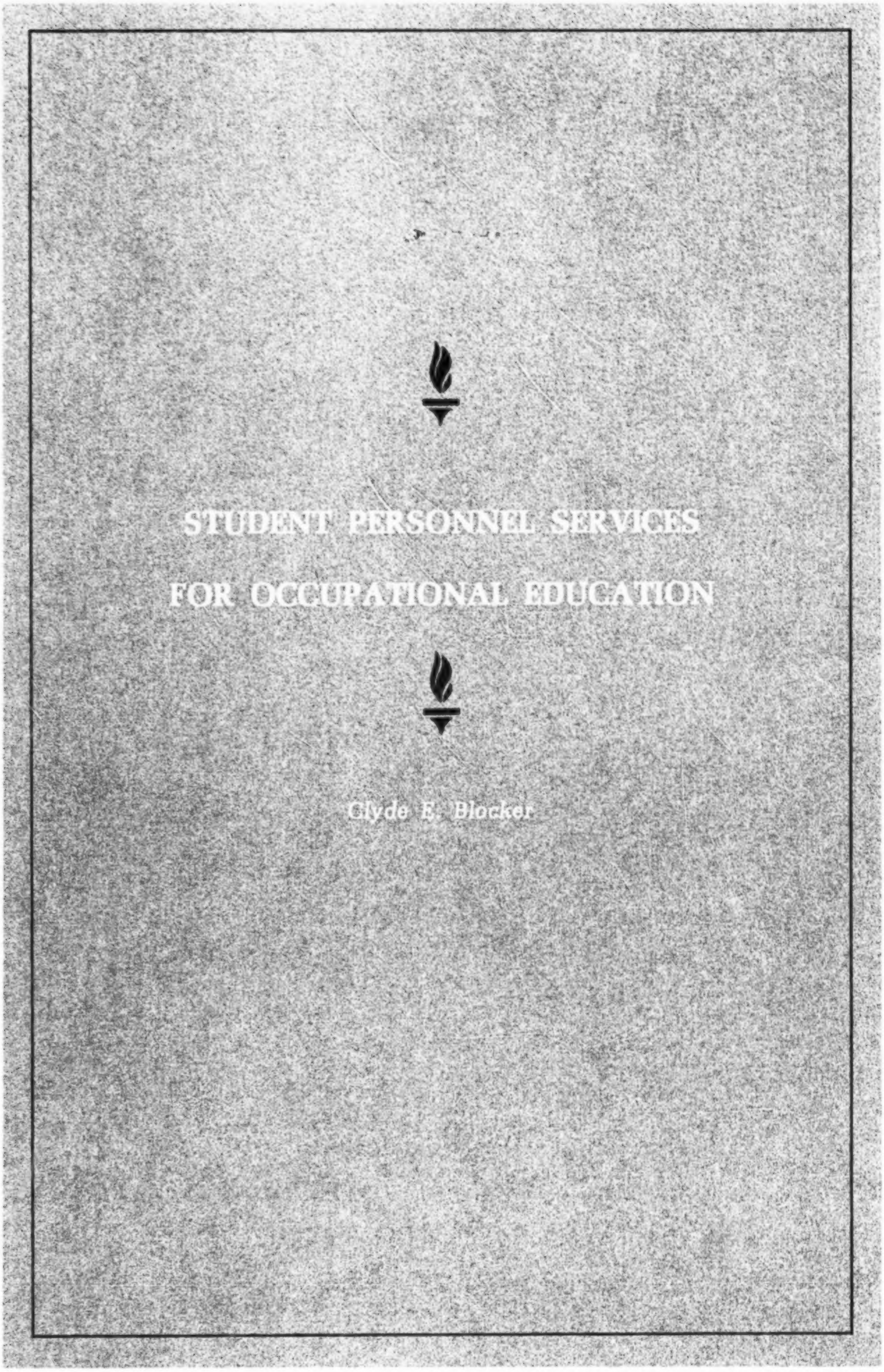
[12] National Science Foundation. *Scientists, Engineers, and Technicians in the 1960's*. Washington, D.C.: National Science Foundation, 63-64, 1963.

[13] Welch, John M. *Junior College Programs for the Hospitality Field.* Ithaca, New York: Council on Hotel, Restaurant, and Institutional Education, December 1962.

[14] Gouldner, Alvin W., and Helen P. *Educational Implications of Automation As Seen By A Sociologist:* In *Automation and the Challenge to Education*. Washington, D.C.: National Education Association, January 1962. p. 144.



STUDENT PERSONNEL SERVICES FOR OCCUPATIONAL EDUCATION

Clyde E. Blocker

STUDENT PERSONNEL SERVICES FOR OCCUPATIONAL EDUCATION

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This paper completes the design of a quadrantal view of occupational education in the community college. The other three sides, society, administration, and curriculum, have stressed the external forces which impinge upon students. This paper will concentrate primarily upon the student and his internal needs as he interacts with his environment.

Some Theoretical Considerations

The fundamental referent in most meaningful discussions of higher education is the student himself. All too often educators are prone to compartmentalize their thinking regarding subject matter, curriculum, guidance, and other activities of higher education in such a way that there are no meaningful relationships to the needs of the individuals being served—students. Admittedly, a discussion of specific problems in education must have certain limits, or one would become involved in a morass of variables which would be impossible to handle with any degree of effectiveness. However, a discussion of guidance or any other educational activity must have some functional relationship to the individuals being served. When such a relationship ceases to exist, the service may soon become limited in value to the college and its students.

A second primary factor which must always be kept in mind when discussing technical education is the changing occupational patterns in the United States. As occupational requirements change there must be intra-institutional adjustments reflecting a changing reality in the world of work. Witness the diminution of the importance of home economics as a subject-matter field and as an area of interest to students. Keep in mind also the obsolete practices which are so unfortunately widespread in traditional vocational education on the secondary level. These areas earned their neglect and rejection by parents and students because they were unable or unwilling to adapt to changing conditions in society.

If we examine reality through the student's eyes, we can establish a base from which we can have a meaningful dialogue regarding the relevance and types of guidance services which are necessary if occupational education is to take its rightful place as an accepted part of higher education.

What fundamental psychological needs does the student bring with him to the campus? During the years of adolescence from twelve to twenty, the individual is struggling to become emotionally independent of parents, teachers, and other authoritarian figures. His progress is littered with roadblocks; however, his responses are for the most part positive rather than negative. He is subjected to the longest period of economic and emotional dependence of any group in the world, being required to attend public schools at least until the age of sixteen. The social mores put strong pressure upon him to graduate from high school. The nonhigh school graduate is psychologically incomplete and to a large extent rejected by society. He remains economically dependent upon his family, either wholly or in part, during the years he is in school. His emotional responses are limited by tradition, and his range of choice of behavior and self-direction is narrowly defined by his family and by society in general.[1]

The student's life is further complicated by his need to shift his emotional relationships from a subordinate-superior context with his parents to peer equals with whom his emotional relationships are mutual and not dependent. This change, which is essentially a healthy shift to an adult heterosexual adjustment, occurs in high school and during the early college years. This shift in relationships is an imperative aspect of adult maturity, and those students who are unable to readjust themselves to mutually interdependent emotional relationships with others are the maladjusted adults of tomorrow.

During this same period many students are torn by feelings of guilt and anxiety resulting from their changing emotional relationships with their parents. Not all are certain that this is a necessary and acceptable change in behavior and feelings, and in many cases their problems are complicated by their parents' difficulties in making their own personal adjustments to the aging process.

The second major psychological drive is the student's need to become economically independent. Such a transition is relatively easy in an agrarian society, but the gulf between immature dependence and real economic independence in our current society is substantially wider than in former years. Consider, for example, that our current institutional arrangements, both in education and in industry, exist in part to keep young people out of the labor market. There are legal restrictions on their participation in economic activities of a productive nature and, far more important, adult and peer group pressures which encourage them, in none too subtle a fashion, to continue formal education in their mature years.

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[1] Maslow, A. H. *Motivation and Personality*. New York: Harper and Brothers, 1954.

Economic independence requires a substantial personal income. This is the result of the unprecedented increase in the material standard of living in the United States since World War II. The fact that material possessions costing substantial amounts of money are important in American life, despite any protests on the part of religious and educational leaders, has not been lost upon our youth. They, too, have higher expectations in regard to the possession of automobiles, adequate housing, clothing, and expensive entertainment as a right rather than a privilege. Such expectations often run contrary to their long period of economic dependence in which others make decisions as to whether they may have such material possessions or access to expensive leisure-time activities.

A significant number of American college students are emotionally immature at the time they come to the campus. Many of them leave in the same way. Manifestations of their immaturity include the widespread lack of definitive educational and occupational objectives, and their continued dependence upon adults for personal decision making. The mature person is able to respond to an objective world, to analyze himself and his environment in a rational way, and to arrive at and accept the advantages and disadvantages of decisions made by himself. Such rationality is dependent upon a high level of personality integration. The immature person seeks advice and direction from others. He is unable to overcome his emotional dependence and continues to behave in response to unmet personality needs. He has not succeeded in making his world an orderly and predictable place, nor has he been successful in ordering his activities and his relationships with others on an adult level. Many such students over-react to their peer group, accepting without question others' perceptions of reality and thereby making decisions for themselves which to the impartial observer are obviously unrealistic and unsatisfactory.[2]

Unfortunately, American higher education has been so preoccupied with the training of subject-matter oriented faculty that it has paid too little attention to the education of teachers who are capable of understanding and dealing with students' personality needs. The development of programs for training guidance personnel has been a partial answer to this persistent problem. As we all know, despite our progress in this arena, much is left undone on campuses today.

Present Guidance Practices

There is no doubt that community colleges fulfill societal needs not met by other educational institutions, and one of the most important of these is counseling and guidance. It is well to keep in mind, however, that there are practical limitations as to the extent to which the community college can effectively meet the needs of all students. That is to say, we must always keep in mind that students will be with us a relatively short period of their total lives. If they make normal academic progress in our programs they will spend a total of eighteen months on the campus. We should expect neither miracles as reflected in changes in attitudes, nor the overnight development of psychological maturity simply because these students are associated with a college campus for one semester, two semesters, or two academic years.

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[2] Sanford, Nevitt. *Self and Society*. New York: Atherton Press, 1966. p. 168.

We should also bear in mind that the student brings with him to the campus his previous life experiences, which have shaped and molded his personality, developed or failed to develop his abilities, and have to a large extent determined the level and direction of his motivations. Remember, the family had him for eighteen years, the public schools had him for twelve years. The experiences and conditioning which he received during this formative period are probably deeper and more long lasting than any experience we can give him in a community college.

Until recently there was very little substantive information about guidance practices in community colleges. The study conducted by the National Committee for Appraisal and Development of Junior College Student Personnel Programs, under the direction of Max R. Raines, provided information of inestimable value to all those concerned with the adequacy of guidance in two-year institutions.[3] The findings are particularly significant for occupational education. Occupational education is relatively new, has limited acceptance by educators and the lay public, and requires, above all else, a firm base in guidance services if it is to serve students adequately.

Raines concluded that current guidance programs are far from being adequate for the task ahead. He concluded that three-fourths of the junior colleges studied have inadequate programs. Of the twenty-one basic functions he defined, he found that only 25 per cent of the larger colleges were meeting their responsibilities in a satisfactory manner and that a like situation existed in smaller junior colleges. Five functions relating to the counseling of students were adequately provided in less than one-half of the colleges.

One of the most serious deficiencies was the lack of up-to-date and comprehensive career information. Raines goes on to say:

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[3] Raines, Max R. *Junior College Student Personnel Programs: Appraisal and Development*. National Committee for Appraisal and Development of Junior College Student Personnel Programs, 1965.

> *Almost none of the junior colleges were providing such information with any effectiveness. If any effort was made at all, it usually consisted of an outdated file of occupational information that was seldom used by counselors or students. Those colleges which have attempted to do more have found it difficult to identify suitable sources of information that can be used effectively in group guidance or individual counseling sessions.*[4]

Other deficiencies identified in the report included a lack of adequate coordination, evaluation, and upgrading of guidance functions and the almost total lack of community guidance services. Trained leadership was found to be meager in forty-nine large colleges. Only 18 per cent of the deans of students had doctorates in behavioral and social sciences. Forty per cent of the programs were headed by individuals with less than a master's degree in behavioral sciences or personnel work. Raines was also critical of the level of staffing of guidance programs, estimating that there were 800 full-time trained counselors in 719 junior colleges, a ratio of 1,200 students to one counselor. In sum, his report is convincing evidence that most community colleges have not achieved desirable qualitative and quantitative levels of guidance services.

It may also be observed that community colleges have not escaped the dilemma of psychological and functional division into an academic community and a guidance community. When one talks to college administrators he finds that in many cases there is less than complete unanimity as to the relative importance of the functions of the academic faculty and those performed by guidance personnel. The matter is complicated further by the schisms which exist between technical and semiprofessional faculties and a majority of teachers of traditional liberal arts and sciences courses. This issue is of major importance to the successful implementation of guidance functions for the benefit of technical and semiprofessional students. If the general image of guidance and occupational education is to be improved with students, parents, the lay public, and the academic community, respect for this type of training in guidance must be developed within these groups.

An impediment to the acceptance of such innovations in higher education rests to a large extent in the academic "in" group, those who have the credentials of an academic discipline and are granted equal status by their faculty colleagues. This "in" group constitutes a powerful informal organization on many college campuses. Its influence can be seen in the development of educational policies inimicable to the improvement of guidance services. All too often guidance personnel have reacted as an "out" group and have developed a competing hierarchy, having its own esoteric language and its particular status symbols.

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[4] *Op. cit.*, p. 21.

Our first problem is the university preparation of professional personnel. The education of individuals who will eventually make up the professional core of community colleges must more nearly approximate the kinds of responsibilities which they must assume in this particular kind of institution. First, let us examine the teaching faculty. The primary emphasis upon the training of faculty is focused upon a subject discipline. This is all well and good, in that we need teachers competent in the material they are to teach in the classroom. It should be noted, however, that most community colleges describe the role of the faculty as consisting of teaching, student advising and counseling, and committee work. Few graduate programs are specifically designed for the preparation of college teachers, and virtually none provide for an adequate grounding in the social and behavioral sciences. Thus, we find teachers joining college faculties with little or no understanding of the dynamics of human behavior and the relationships between educational and vocational choices and personality needs.

Second, as has been pointed out, Raines found serious deficiencies in the professional training of guidance personnel, as well as serious understaffing in most community college guidance departments. Preparation of active personnel in this field was deficient both qualitatively and quantitatively. There is a recognized body of theoretical and substantive material in the behavioral and social sciences which is applicable to professionalized student personnel work. As long as institutions lack well qualified personnel to discharge these responsibilities, there will be serious shortcomings in our attempts to provide adequate guidance for technical students.

Last, administrators responsible for the overall development and direction of institutions must also have adequate knowledge and perceptions of the value of guidance services in the institutional setting. These individuals will be responsible for the distribution of college resources among various programs and, if they fail to understand the vital importance of counseling and related guidance services, there is little hope that the institution can develop a balanced program.

Implementation and Organization of Guidance Services

Richard C. Richardson, Jr., has developed a tri-level concept of guidance services. Such organization should do much to improve guidance services for occupational students.

The first level of student service is that done by the teaching faculty members, and involves faculty advising and the sponsorship of student activities. Much, but certainly not all, faculty advising involves educational programing. As the staff members most closely in contact with individual students, the importance of a vigorous faculty advising system, as well as the significance of interested faculty sponsors, cannot be overemphasized.

The second level of student service is that provided by the professional counselor. Such counseling is likely to be more intensive and to involve a broader range of topics than that provided by the faculty adviser. Examples of second level services include problems of vocational choice, the reduction of emotional tensions resulting from personal problems, social information, psychological testing, and such other areas as may be considered appropriate.

The third level of student services is that provided by specialists in a number of areas, who devote substantial portions of their time to the organization and supervision of such functions as placement and follow-up, financial aids, admissions and recordkeeping, psychological diagnosis and referral, and student activities. These services provide support to first- and second-level personnel, thus enabling them to spend a greater percentage of their time in direct contact with students.

Overlaying all three levels of student service must be a pervasive and well-directed system of referral that ensures the movement of students to the appropriate individual who can best provide the services required. It is this system of referral that most frequently breaks down in the traditional organizational patterns for student services. The tri-level organizational pattern will do much to ensure an adequate and effective referral system in which students may take advantage of all available college resources.

Essential to this concept is assignment of professional counselors to the teaching division level as opposed to retaining them in a central pool. While this constitutes a novel approach to the use of such individuals, there is much to be said for it. The following benefits can result:

1. The counselor is housed where the students are and where they are accustomed to coming for assistance from faculty members. Consequently, the stigma frequently associated with visiting the "clinical" counseling center is dissipated.

2. The close interaction between counselors and instructors necessitated by the housing arrangements and frequent division contacts improves counselor-teacher interaction and leads to a process of mutual education whereby the teacher comes to know and respect the functions of the counselor while the counselor

learns in depth the teaching mission and specialization of the division.

3. The process of referral between the three levels of student service is greatly facilitated since there are functional line and staff relationships between each level.

4. Central services of the student personnel staff has direct lines of communication with the teaching divisions by means of the division counselors who may be called in weekly for staff meetings and in-service training sessions.

5. The counselor, being more directly on the firing line, gains a more realistic concept of the function of counseling in the community college as opposed to the clinically oriented university counseling center approach.

6. Division teaching units and counseling staff economically and effectively may share clerical staff since the peak loads of one seldom correspond with the peak loads of the other.

The tri-level concept of guidance can be an effective instrumentality in the implementation of guidance personnel of a comprehensive community college as illustrated by Norman C. Harris.[5]

Educational Responsibilities of the Guidance Service

The student personnel department must have some formal educational responsibilities if it is to serve the needs of technical students, and if it is to become an integral part of the academic community. I am suggesting here that comprehensive community colleges need a vestibule program which can be made available to students wishing a college experience but who are not qualified for admission to either technical or transfer programs as they currently exist. This vestibule program should be under the direction of the dean of students and should have as its objectives: (1) the development of skills in general education, (2) the communication of occupational information of specific import to students, and (3) introductory courses in which the student can sample one or more technical or semiprofessional programs.

This concept is somewhat different than that undergirding most remedial or developmental programs now available in community colleges. It envisions the development of a teaching-counseling team consisting of appropriately trained faculty members and counselors. The student/teacher ratio in the program should not exceed 20:1, and the ratio of counselors to students should not exceed 50:1. Such a program would make it possible for students to learn essential facts about occupations and their educational requirements. It would give the faculty an opportunity to observe each student during a semester or a year and, at the end of this period, determine whether or not he should be permitted to move into a technical or transfer class schedule. Students who could not successfully master the requirements of the program would still have had a meaningful collegiate experience and could be directed toward an occupation in the community, the demands of which they could meet without further education.

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[5] Harris, Norman C. Flow Chart prepared for presentation at Technical Education Conference, Midwest Technical Education Center, St. Louis, Missouri, May 1966.

Recruitment of Students

Perhaps the most serious problem facing technical education today is the difficulty in recruiting qualified students in sufficient numbers to meet the demands of industry and to utilize expensive facilities at an appropriate level. Much of the emphasis of this publication has been upon the necessity of improving the public image of technical education. Frequently, a major share of the responsibility for the failure to do so is laid at the feet of guidance personnel. It may be important at this point to stress the limitations and the potential contributions of guidance services in this area.

The admissions service, along with counseling personnel, constitutes the first external link with high school teaching and counseling personnel. As such, they must constantly apprise high school personnel of the occupational programs in the college, the educational requirements for these programs, and the need for trained personnel in business and industry. At present, counseling staff members frequently lack the detailed knowledge of the occupational programs they represent which is necessary for successful presentations. It's the old story of having to know the product you plan to sell. Further, the complete reliance on counseling personnel to do the selling at the high school level is unwise since counselors, by their very orientation, tend to present information without making recommendations. Consequently, their efforts at the secondary level may only reinforce existing biases. The assignment of a counselor as a member of the division team, combined with the judicious use of teaching faculty members as back-up personnel for high school visitations, should make recruitment at this level increasingly effective.

The development of effective communication from the college to the community with regard to occupational programs will continue to be impeded by the lack of accurate and comprehensive career information. Raines has recommended that, "Adequate methods for the analysis, preparation, and distribution of career information must be established in conjunction with related agencies at the federal, state, and local level." It is apparent that individual community colleges have neither the staff nor the resources to maintain comprehensive libraries of career information. The cost of individual college programs of this sort would be prohibitive, in that, such information is rapidly outdated, it is difficult to secure, and it requires careful presentation before being made available to students. The primary responsibility for adequate occupational information should rest with state and federal governments. Such material might be developed by governmental agencies and deposited in regional centers, from which a large number of colleges could draw information as needed. Providing counseling personnel with comprehensive and up-to-date career information would make recruitment from the college vestibule program and from those students who have unwisely elected the transfer program far more efficient than it is at present.

Of course, it must be emphasized that the absence of readily available career information at the present time is no excuse for guidance staffs to sit back and await the implementation of my recommendations at the state and federal level. Far better use can be made of existing information through seminars, career nights, and other devices designed to increase student awareness of the importance of occupational choice as well as the breadth of career opportunities. There are also many undeveloped sources of information within the community that could, if properly utilized, do much to improve the availability of recruiting information. Again, however, such information will never be properly utilized so long as guidance personnel are permitted to operate from a central pool where they are permitted to view themselves as primarily concerned with the resolution of personal problems.

Harris has set forth a most insightful analysis of the overall problem:

> *Recruitment is largely a matter of public information. Parents, students, high school and junior high school faculties, potential employers, and citizens in general must be made aware of the nation's need for middle manpower; of the growing status, attractive salaries, and excellent working conditions of jobs at the semi-professional level; of the programs and facilities available at the local college for occupational education; and of the significant occupational trends in the manpower structure which bode nothing but ill for the future for the uneducated and untrained. News releases, brochures, slide-filmtape programs, speakers, open houses, television programs, realistic pronouncements from business and industrial leaders—all these and more must be used, and they must be used continuously. Fletcher advertised Castoria for forty*

years before "babies cried for it," and we haven't really made that kind of effort yet.[6]

It is only fair to point out, however, that the kind of effort Harris calls for cannot be left as the sole responsibility of the guidance staff. It must be an institution-wide effort coordinated at the highest level and utilizing personnel within the college for those tasks that they are best suited to accomplish.

If technical and semiprofessional training is to be understood by a broad segment of the population, it must have a much more thorough and extended interpretation through college staff members. The transfer program is well-understood by a majority of the population. Technical and semiprofessional occupations are new on the business and industrial scene. So, too, is the training for such occupations. Such interpretation must begin with facts about educational requirements, occupational opportunities, and the importance of such training to individuals and to society in general. Students require extensive help in understanding the importance of technical preparation but, in addition, they need help in understanding the appropriateness of courses in social sciences and humanities to their total educational experience. Unfortunately, many occupational students reject nontechnical courses as extraneous to their needs. Little do they realize the necessity of having skills in written and spoken communication and understanding of the social sciences and the fundamental grounding in mathematics and sciences as general education subjects.

The Placement Function

Next to recruitment and selection of students, the topic that is likely to be of greatest concern to technical educators is student placement. The faintest rumor that the graduates of a given occupational program cannot be successfully placed in appropriate positions can cause the stoutest heart to quake. At the same time, increasing concern about recruiting practices with respect to two-year college graduates is evident. How can occupational programs achieve the desired stature as long as employers do not recognize the need to improve the dignity of current practices, wherein students may be subjected to pressures to leave school prior to completion of their program on the one hand or involved in a procedure that approximates the union hiring hall on the other?

The placement function should be carefully evaluated and reorganized so that it becomes an integral part of occupational education programs and guidance services. The placement of technical personnel is as vital as the transfer of students from two-year to four-year colleges. It is an axiom that if graduates of these programs cannot be placed in jobs of higher status and pay than those secured by high school graduates, the entire program will suffer from the lack of community support and student interest. The placement of students in appropriate jobs and their consequent successful occupational adjustment is imperative if technical education is to serve a significant number of community college students. In this connection we cannot overlook the importance of technical and semiprofessional training as it relates to the upgrading of job skills of adults. Placement activities can be important, both for the satisfactory adjustments of graduates in business and industry and for the recruitment of new students.

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[6] Harris, Norman C. *Curriculum and Instruction in Technical Education.* Presentation for Technical Education Conference, Midwest Technical Education Center, St. Louis, Missouri, May 1966.

The placement function should be a cooperative effort involving technical faculty and qualified guidance personnel. It should proceed simultaneously on a number of levels which include part-time work experience for students who must be partially self-supporting (noncooperative programs), cooperative education programs in which there is a meaningful functional relationship between the work experience and classroom study, the placement of graduates in full-time employment, and the placement of adults who, through education, have acquired skills of a higher level. Placement officers can also perform a desirable service by encouraging employers to permit students to complete a comprehensive technical curriculum before they are offered full-time employment. One of the negative factors in the public image of occupational programs is that too many students are only half-trained before seeking employment. If the occupational curriculum is educationally sound, the student should be expected to complete all the requirements before being classified as a competent specialist in the field.

Guidance and occupational education personnel should make a concerted effort to develop and operate extensive cooperative work-learn programs for their students. Such an arrangement would have many advantages:

1. Occupational information in relatively abstract form can never substitute for direct personal experience on the job. Students would have an opportunity to know firsthand the kind of environment in which they would work after graduation.

2. Such personal experiences would establish the relevance of course work and other college requirements to the occupation.

3. The placement of college graduates in specific businesses and industries would be facilitated.

4. Employers could be convinced of the worth of community college technical training.

5. Such an arrangement would facilitate communications between the college faculty, guidance personnel, and industrial personnel.

The business community can be made aware of the importance of occupational education through the placement service. Not only should they know of available trained manpower, but they should also be kept informed as to the specific kinds of occupational training and course patterns required of technical students. On-the-job success of technical program graduates will be the best advertising for the college and its specialized programs.

Conclusion

I have touched briefly upon some problems and some suggestions which hopefully would improve the effectiveness of student personnel services in relation to technical and semiprofessional education. I would like to conclude my presentation with some specific recommendations which should lead to greater understanding of our problems and perhaps to some acceptable solutions. The implementation of these recommendations will depend upon federal and state governments, universities, community college trustees, administrators, faculty, and guidance workers, as well as the American Association of Junior Colleges. It is my very strong opinion that we can find satisfactory solutions to our current dilemma only if all of these agencies work together in such a way that each will contribute its particular resources in cooperation with the others.

It is recommended that:

1. A network of at least twenty-five to thirty major universities distributed geographically over the United States should be encouraged to develop training programs for new faculty personnel who will fill administrative, teaching, and guidance positions in public and private community colleges. In addition, these centers should provide in-service training programs, as information centers, and as producers of both theoretical and operational research.

2. The American Association of Junior Colleges should expand its role as the informal coordinating agency for inter-university and university-community college communications and cooperation. The Association should also continue its fine work of stimulating philanthropic foundation interest in community colleges.

3. Federal funds should be made available for fellowships for the training of at least 500 guidance specialists each year. Recipients of these grants should come from college and high school faculties and should complete at least 30 graduate hours in social and behavioral sciences and personnel work.

4. Universities should organize and conduct high quality in-service training programs for community college personnel, such programs to be carried on during each academic year. Community colleges should encourage faculty participation by making adjustments in personnel assignments and financial subsidization of tuition costs. The primary emphasis of such programs should be in social and behavioral sciences and, at least in some instances, in student personnel work.

5. Community colleges should immediately examine their administrative organization with a view to improving guidance functions. This analysis should include a realistic study of personnel needs, a definition of functions to be performed, and internal reorganization of the institution to insure more effective service to students.

6. States having sparse as well as dense populations should assign to some community colleges specialized technical and semi-professional programs and provide student housing so that a relatively large geographic area could be served. Program costs, small numbers of students, and lack of trained teachers in some technical specialties make it apparent that all colleges should not necessarily offer all technical programs.

7. A federal agency should develop and disseminate comprehensive occupational information to community colleges.

8. Admissions criteria having nationwide applicability to occupational programs should be developed and made available to all community colleges.

9. High school counselors should be sufficiently involved with community colleges and their programs that they can help high school students understand and take advantage of educational opportunities in occupational programs.

10. Criteria for the evaluation of student personnel programs should be developed and applied to such functions in community colleges in an attempt to improve service to students.

11. A number of community colleges should be selected as demonstration centers in which innovations in guidance and occupational education could be tested.

RECOMMENDATIONS

RECOMMENDATIONS

Following each of the major presentations, conference participants formed discussion and reaction groups to consider, discuss, and evaluate the materials, suggestions, guidelines, and ideas given to them by the speakers. The primary objective of the discussion groups was to make recommendations concerning occupational education in the community junior college.

The leadership in the groups was provided by Robert E. Kinsinger, Vernon L. Hendrix, Michael Brick, and Ken August Brunner.

The following report of the recommendations of the groups has been taken from papers prepared by these four leaders. The full text of each report is available, and may be obtained by writing the Occupational Education Project, American Association of Junior Colleges, 1315 Sixteenth Street, N.W., Washington, D.C. 20036.

I

Recommendations based upon *Occupational Education and Society*, by Edmund J. Gleazer, Jr.; a summary of a report made by Robert E. Kinsinger, director, Public Affairs and Education, W. K. Kellogg Foundation:

1. The AAJC or organizations like M.T.E.C. should encourage coordination between the several professional groups which are concerned with various levels of occupational and vocational education in terms of promoting such programs.

2. Junior colleges who do not have directors of public relations should hire such persons—the smaller junior colleges on a part-time basis.

3. Bright young leaders of occupational education programs—directors or assistant directors—should be urged to apply for fellowships in the junior college leadership programs around the country.

4. There should be national development of an instrument which could be used to collect data on job needs.

5. Technical educators should be willing to work together and support the overall cause of technical education rather than sit smugly in their own little shell and push only the specialties which are part and parcel of their own institution.

6. The U.S. Office of Education should be encouraged to recognize community colleges, associate degrees, technical programs and enrollments, in legislation, regulations, statistics.

7. A national effort should be made to gather and publish case histories of successful technicians.

II

Recommendations based upon *Occupational Education and Administration*, by F. Parker Wilber; a summary of a report made by Vernon L. Hendrix, assistant professor, School of Education, University of Minnesota:

1. Methods and ways must be found to achieve equality for technical programs and to promote greater integration of technical programs with other programs in the college.
2. In order to avoid extra-college influences upon the colleges that do not support in full measure the curriculums developed by the college, greater autonomy in administration for community junior colleges is urged.
3. There should be more localized endeavor on the part of community junior colleges in public relations, effective use of advisory committees, and community liaison activities.

III

Recommendations based upon *Curriculum and Instruction in Occupational Education*, by Norman C. Harris; a summary of a report made by Michael Brick, associate professor of higher education, Teachers College, Columbia University:

1. Institutions involved in the education of teachers and administrators need to carry on a continuing critical review of the relevance of what is being taught and how it is being taught, together with a search for what is not being taught that should be and an experimentation with new approaches.
2. The development of general programs in technology areas, perhaps designated as core programs, should be encouraged.
3. The idea of the comprehensive community college must grow from a concept to a practical reality.
4. Community college presidents must seek personal involvement in the occupational education programs and demonstrate enthusiasm for them in the same degree they do for the transfer program.
5. Community college technical curriculums must be planned at several levels of rigor, in order that students from a rather wide range of academic abilities may be served.
6. Much more use should be made of lay advisory committees in planning and operating occupational education programs.
7. Attitudes of faculty members will have to undergo great change for the individual day-to-day involvement of faculty in the total educational program of the college determines the success or failure of the enterprise.
8. The terminology of "terminal" education should be dis-

couraged and students encouraged to accept the idea that all education is continuing.

9. Colleges should develop a format for employment surveys and use college staff on summer study activities using the employment surveys.

10. Regional planning rather than mere local planning should be encouraged.

11. Administrators should do more in providing materials and aids for teachers of technical subjects.

IV

Recommendations based upon *Student Personnel Services for Occupational Education*, by Clyde E. Blocker, a summary of a report made by Ken August Brunner; professor of higher education, Southern Illinois University:

1. Innovative and open-minded persons should be selected for leadership positions in occupational education, with responsibility to emphasize occupational education programs and students in student personnel services.
2. Student personnel services staff should be involved in programs of in-service education for community college instructors.
3. A procedure should be devised whereby there can be a sharing of information about changing employment conditions so that counseling and guidance staff can be completely and currently informed.
4. More use should be made of occupational education instructors in the counseling and guidance functions.
5. Regional "Emphasis Technical Education" conferences should be scheduled to draw together student personnel people, administrators, and teaching faculty to establish a "cross-fertilization" of activities and an articulation of mutual interests and concerns in the occupational education areas.
6. The student personnel services staff should establish or reinforce lines of communication between the community colleges and the high schools.
7. The American Association of Junior Colleges is encouraged to develop a comprehensive program to advise counselor organizations and training centers of the needs and requirements for counseling in community junior colleges.
8. Occupational education should be given equal billing in community college newspapers, in the yearbook, in catalogs, and brochures describing the college and its programs.
9. Emphasis in the community college and also in the high school counseling and guidance services should be on the completion of associate degree programs, or certificate programs, not

on "transfer" or "occupational" programs.

10. A collection of experiences or "case studies" of community colleges which have successfully identified and solved key student personnel services problems concerned with occupational education should be prepared and made available to other institutions.